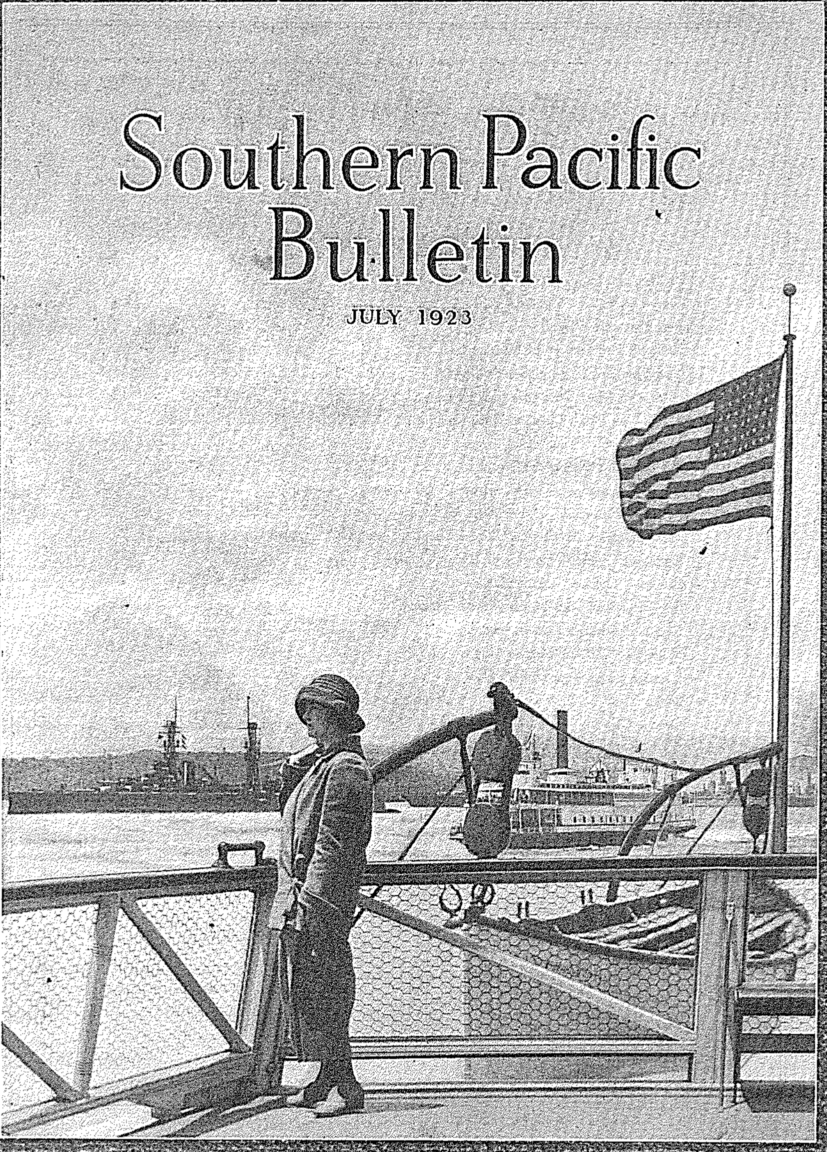
Southern Pacific Bulletin

JULY 1923



The Bulletin

VOL. XII. SAN FRANCISCO, JULY, 1923 No. 7

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Cover Illustration

SAN FRANCISCO BAY, sparkling in the California sunshine, is one of the scenic attractions of the West, a stimulating picture for the traveler from the east, when he crosses the Bay by ferry from Southern Pacific's terminal at Oakland Pier, to San Francisco. The cover illustration this month gives us an interesting glimpse of the famous bay. Ships of the Pacific Fleet lying at anchor in the roadstead are shown in the background and these, with the flag, add touches appropriate to this month in which Independence Day falls.

The Pacific Coast is fortunate in having fine harbors for the handling of large ocean traffic. Seattle, Portland, San Francisco, Los Angeles and San Diego all have well developed harbors with fine facilities for the accommodation of the many deep-sea vessels that touch these shores.

The young lady in the picture is Marie Scanlon, an employee in the Company's Duplicating Department. The photograph was taken on Flag Day from the ferryboat "Piedmont," by E. S. Pillsbury, Southern Pacific photographer.

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Chicago Is Important S. P. Traffic Point

Activities of Southern Pacific at This Great Transportation Terminal Graphically Told in Interesting Articles Written by Employes

The following descriptive articles prepared by employes of Southern Pacific's Chicago Agency under the direction of C. L. McFaul, General Agent, take us on a visit to this famous city which is one of the world's greatest transportation centers. The articles give a special view of Southern Pacific activities at Chicago and are prepared with a keen sense of pride in the organization.

A general survey of Chicago and of the part it plays in the movement of traffic over Southern Pacific lines is given by A. L. Johnson, traveling agent, in the article beginning on this page.

THE Bulletin presents this month details of the activities and conditions surrounding the Southern Pacific organization at Chicago. It is the first of a series of articles dealing with eastern off-line agencies of the Company.

These articles should prove of general interest to all members of the Southern Pacific family, especially those in the traffic department. They will also serve to acquaint those of us on the lines of the Company with our "cousins" who perform vital work at "foreign" traffic centers.

IMAGINE, if you will, a metropolis of some three million people, working, living and possibly sleeping, unless of the commuter type, in a territory bounded by forty miles of lake shore front and with its corporate limits reaching some fifteen miles to the West, and ever increasing.

No railroad passes through Chicago. Thirty-nine of them terminate here. They consist of trunk lines and belt railroads, with harp-string lines of track in all directions gridironing the city, serving its thousands of industries and freight stations. Consider them and you will have a faint idea of the Great Central Market—Chicago.

Contemplate further, twenty thousand factories, with smoke belching forth to the skies, not lazily curling as some idealist chronicler might say, and with each smoke stack bear in mind that here is a potential customer of the Southern Pacific Lines. The normal yearly production of our industries is in excess of six billion dollars. Also remember that in almost every industry Chicago holds a dominant place. The competition for this business by the many lines, consequently, is very keen.

Home of Familiar Labels

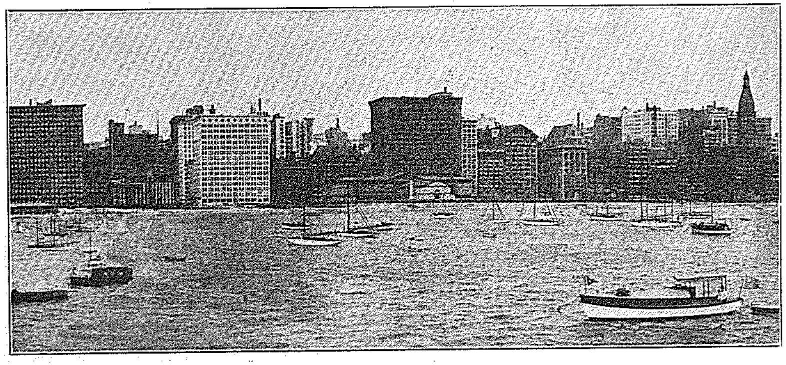
Take a walk through your home town stores. Scan the manufacturers' labels on the articles you see offered for sale, or even the clothier's mark on your own wearing apparel, unless you are in the tailor-made class, and you will better realize the many commodities that are moved from this territory to some jobber, warehouse or agent for distribution in your territory and thence to you—the consumer. Chicago's products are many and varied.

Our packing-houses are world famous, and on the visitors' register at Armour, Swift or any of the larger plants you will find the names of representative citizens from all the countries of the world, including the Island of Yap. Look into their general offices at the busy traffic departments. Here men, full of "I-will-ism," are directing the traffic destinies, and routing their shipments to best advantage.

Their routing sheets would doubtless show trains of hogs from Nebraska to San Francisco for killing; train lots of spring lambs originating in California's glorious valleys enroute to Chicago for distribution. Here are carloads of eggs, possibly the premium Petaluma whites for consumption in Eastern markets; grape juice from Chicago or York State to you, and orange juice from Los Angeles to quench the thirst of the East; canned fruits to us from you and canned vegetables and meats from Illinois, Indiana or Wisconsin to you; vegetable oil from the Orient through the Port of San Francisco to the soap and butter substitute plants here, and cheese from Wisconsin and New York to you. Truly this is the foodmart of the world.

Famous "Loop" District

Go with me through our busy downtown district, designated as the "Loop." Scan the various building



Section of Chicago skyline and business district as seen from Lake Michigan.

registers where we regularly call. Our quest is the industrial traffic manager and his department. Maybe the commodities on which routing is controlled at these traffic founts will interest you. They are many and varied. Steel and its articles of manufacture, agricultural implements, automobiles, tractors, machinery, bags and bagging, household goods, furniture, musical instruments, talking machines, paper, export and import goods, petroleum and its products, and a host of other commodities in use daily at all points on our system, including the new infant, the San Diego and Arizona Ry. The movement may be from or into this territory,—it matters not. They have business for our rails and we are here to sell them our service.

Let us now take a ride from the Loop to the producing parts of the city. Here is activity. Building water tanks rear their silhouette against a smoke-clouded sky, and by the close proximity of the plants we realize we are in a so-called manufacturing district. The factories are large, well-lighted and well ventilated, and much attention is paid to welfare and community work. Chicago, it is evident, is in advance of the times. A mention of the names of a few of the principal districts might interest you. They are Central, Kenwood, Clearing, Cicero, Hawthorne, North Pier, Calumet, Waukegan, Pullman, and possibly some others as yet in embryonic form, but which with added development will be likewise designated. Each is served by its own particular belt railroad,—sometimes two or three, all feeders of the large trunk lines.

You have now been to the yards, the downtown and nearby producing points. Let us continue on our tour of the outskirts and possibly a manufacturing district or so.

Electric Plant is a City

In the hazy light there appears what might be a citadel or possibly a young city. On closer view the well advertised staggered-typing of the Western Electric Company meets our gaze. This plant is well guarded by uniformed officers and admission by pass is necessary. Here 32,000 men and women manufacture your telephone instruments, electric light bulbs and cable for the lines of communication in your city;—one of the largest manufacturers of electric goods in the world. The Manufacturers Junction Railway of Chicago is owned by this concern and is a medium for the outlet of their tonnage to the world.

Our country readers will possible be interested in the origin of their mail-order catalog. Sears Roebuck & Co., and Montgomery Ward & Co. are housed in mammoth buildings with scattering factories for manufacturing certain of their products located all over the United States. Their catalogues alone require two printings a year. Mailing labels move by U. S. Mail, all addressed with stamps cancelled, and their arrival timed to coincide with the catalogues moving by freight. At certain points warehouses are maintained to serve as distributing centers for heavier commodities.

You are doubtless familiar with our inbound traffic in fruit and vegetables, but in passing we will try to make you better acquainted with our South Water Street friends here, in the commission business. They are the marketing factor for your produce in this territory. To them are billed your fruits and vegetables, cantaloupes, and all else that comes from the "Land where God never ceases to smile." We recognize their traffic power, are in close touch with them at all times.

Do not forget, however, that your orchards are made to grow by the judicious use of fertilizer from Chicago, and in times of great distress by an expedited movement of orchard heaters, likewise from Chicago.

PERSONNEL OF THE CHICAGO GENERAL AGENCY

By HELEN M. SEIDCHECK,
Ticket Clerk

THE Chicago organization is headed by General Agent C. L. McFaul, who regardless of the fact that he has not reached the fifty year mark, has had thirty-seven years railroad experience, fifteen of which were in the Operating Department. Operating experience includes that of telegraph operator, agent, stenographer, train dispatcher and superintendent's chief clerk. This was followed by a training for the past twenty-two years in the Traffic Department at various points on our home lines.

The Passenger work is under the immediate direction of H. H. Gray, District Passenger Agent, who started his railroad career in June, 1912, with the Pere Marquette Railroad, transferring in the same year to the Chicago & Northwestern Railroad, Chicago office, and again in the same year to the position of ticket agent for the Southern Pacific Lines in the Chicago office. This position he occupied until May, 1918, when the office was closed. During the war Mr. Gray was stationed as Traveling Agent under John T. Monroe, General Passenger Agent at New Orleans. He is assisted by H. W. Bartsch, who recently came to us from the New York Central Lines as City Ticket Agent. Miss Helen M. Seidcheck handles the mail solicitation. The outside passenger solicitation is taken care of in territory by the regular traveling agents, supplemented by the work of G. A. Thiess and C. E. Darkus, who specialize on passenger business, particularly organized parties.

The Freight Department is under the direction of T. H. McMenamin, Chief Clerk. Mr. McMenamin came to our lines after an experience of ten years in various capacities with the Western Trunk Lines Committee and Trans-Continental Freight Bureau. Under Mr. McMenamin's direction are the following bureaus: Freight Rates, Docket and Rate Advices, Export, Stenographic, Manifest and Sales Force.

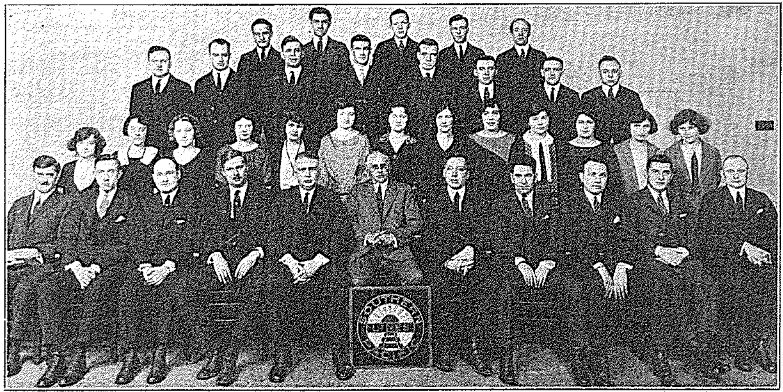
The Freight Rate Bureau is in charge of Chief Rate Clerk, J. T Wright, who came to us from the National Biscuit Company, after having served several years in the rate department of the Chicago & North Western Ry. He is assisted by A. C. Stone, who was trained in the New York Central.

The Export and Import Bureau is handled by A. C. Hedlund, Foreign Freight Agent, who began his service with the Southern Pacific in the Chicago office in 1903, serving in various capacities up to that of Freight Agent, to which position he returned on the reopening of the office.

The Stenographic Bureau is managed by Miss Genevieve Sullivan. Miss Sullivan was one of the stenographic force in the Chicago office prior to the war, returning on the reopening of the office.

The Sales work for the entire territory is handled by Traveling Agents A. L. Johnson, Paul Ceder, E. J. Reid, working in the City of Chicago; J. J. Kane, who is a booster for Milwaukee and the State of Wisconsin; Edward Burger who thinks that the most wonderful territory in the world is St. Paul and Minneapolis and the territory north and west thereof; C. D. Hadlock handling the western half and the northern portion of Illinois and the eastern half or the northern portion of Iowa; Ralph Crysler, traveling the northern half of Indiana and the eastern half of the State of Illinois outside of Cook County.

The Telegraph Department is under the direction of W. G. Rice, who began his service with this Company in 1904, and has been continually employed by us since that time.



General Passenger Agent's force at Chicago. Left to right—top row: V. Frale, L. Holmes, M. Scanlon, Clerks; A. C. Stone, Asst. Rate Clk.; J. C. Myers, Tel. Opr. Second row: E. J. Reid, C. E. Darkus, Trav. Agts.; J. T. Wright, Rate Clk.; W. H. Farner, Clk.; W. G. Rice, Tel. Opr.; B. T. O'Neill, Clk.; G. A. Thiess, Trav. Agt.; H. W. Bartsch, C. T. A. Third row: F. Norris, Phone Opr.; G. Sullivan, H. Niemoth, E. Nielsen, Stenos.; Mrs. P. Hall, Clk.; Mrs. P. Rhew and Leone Easterly, Clks. to E. C. S. A.; E. Berger, Steno.; M. Zibor, Files; H. M. Seidcheck, Tkt. Clk.; J. Good, Steno.; H. Shaughnessy, Secy. G. A.; V. Keefe, Steno. to E. C. S. A. Bottom row: A. C. Hedlund, Forn. F. A.; P. R. Ceder, E. Burger, A. L. Johnson, Trav. Agts.; H. H. Gray, D. P. A.; C. L. McFaul, General Agent; S. S. Sprague, Eastern Car Service Agt.; T. H. McMenamin, Chief Clerk to G. A.; J. J. Kane, C. D. Hadlock, R. Crysler, Trav. Agts.

IMPORTANCE OF CHICAGO AS TRANSPORTATION CENTER

By HAZEL A. SHAUGHNESSEY,
Secretary to General Agent

THE skyline of Chicago viewed from Lake Michigan indicates the density or the concentration of the city's activities in what is known as the "Loop," that portion of Chicago's business district which is surrounded by the lines of the Chicago Elevated Railway.

Chicago is the hub around which revolves the railroad activities of the United States. All of the principal traffic bureaus, such as the Trans-Continental Freight Bureau, Trans-Continental Passenger Association, American Railway Association, Association of Western Railways, and others equally important are located here.

While the population of Chicago within the corporate limits is but 2,701,705, if Chicago followed the plan of her Californian sisters and took into her corporate limits the environs she really should,—all of Cook County,—it would give her a population of over 3,000,000 people. Over thirty percent of the population of the United States is located within a night's ride of Chicago, and her commercial, manufacturing and industrial supremacy is unchallenged.

The Southern Pacific Lines are represented by a general agency that takes care of the business of the northern half of Indiana, Illinois, Iowa and South Dakota, all of North Dakota, Minnesota and Wisconsin, the upper peninsula of Michigan, the eastern half of Saskatchewan, all of Manitoba, and the Province of Ontario as far east as Mattawa. This gives us a territory with a population of about 16,000,000 people, or the equivalent of fifteen per cent of the population of the United States. This is interesting when we take into consideration the fact that all of the states through which the Southern Pacific Line operate, including the lines in Mexico, have a population of but a little over 12,000,000, or 4,000,000 less than the Chicago General Agency territory.

In this important territory are located Chicago with nearly 3,000,000 people, Milwaukee with 457,000, Minneapolis and St. Paul with a combined population of 614,000, Winnipeg with 179,000, Duluth with 98,000, Peoria, South Bend and Ft. Wayne with over 70,000 each, Gary, Ind., Rockford, Ill., Racine, Wis. and Davenport, Iowa, with nearly 60,000 each, and in addition 24 other cities of over 30,000, four cities of over 25,000 and fifteen cities of over 20,000 population.

A list of the important articles manufactured in the Chicago territory would cover many more articles than the catalogue of a mail order house, for to Chicago comes the buyer of all articles of steel and iron, machinery, clothing, boots and shoes, automobiles and tractors, and in fact everything that adds to the comfort and convenience of man.

Courtesy

COURTESY is the one medium of exchange that is always accepted at par by the people of every country on the globe.

Courtesy radiates a spirit of good feeling and suggests that we are not working entirely for the material returns of work, but for the pleasure of friendly human association as well.

Life is too short, and we are never too busy to be courteous. Courtesy is the outward expression of an inward consideration for others, and is always an effective lubricant that smoothes business and social relationships, eliminating friction.—The Outlook.

PASSENGER INFORMATION

By H. H. GRAY
District Passenger Agent

THERE are six passenger stations in Chicago.

The Northwestern Terminal at Canal and Madison Streets, used by the Chicago and Northwestern Ry. exclusively.

The Union Passenger Station, Canal at Adams Street, used by the Chicago, Milwaukee & St. Paul Ry.; Chicago, Burlington & Quincy Rd. (Burlington Route); Chicago; Chicago & Alton and Pennsylvania Lines.

The Central Station, or 12th Street Station, 12th Street at Michigan Avenue, used by the Illinois Central RR.; Michigan Central RR. and Cleveland, Cincinnati, Chicago & St. Louis Ry. (Big Four Route.)

The Grand Central Station on Wells at Harrison Street, used by the Pere Marquette Ry., Baltimore & Ohio RR., Minneapolis, St. Paul & Sault Ste Marie Ry. (Soo Line) and Baltimore & Ohio Chicago Terminal Ry.

The Dearborn Station on Polk at Dearborn Street, used by the Erie RR., Chicago, Indianapolis & Louisville RR. (Monon Route), Grand Trunk, Chicago & Eastern Illinois RR., Chesepeake & Ohio RR., Wabash Ry., A. T. & S. F., and Chicago & Western Indiana Ry.

The La Salle Street Station on Van Buren Street at La Salle, used by the Chicago, Rock Island & Pacific Ry. (Rock Island Lines), New York Central Lines and New York, Chicago & St. Louis Ry. (Nickle Plate Rd.)

All of these stations are located within a radius of about one mile.

The Parmelee Transfer Company operates a high grade service in the transfer of passengers and baggage. Uniformed representatives board all through trains approaching Chicago, exchanging passengers' coupons for bus tickets, or in case passengers not going beyond Chicago, lift passengers' baggage checks, issue claim checks in exchange and have baggage delivered to any Chicago address.

At each station Parmelee representatives are on duty to direct passengers to buses and tickets are examined before passenger is allowed to enter bus, thus preventing any passenger from being transferred to the wrong station.

All initial lines have Depot Passenger representatives to meet and render assistance to those who require it. At many stations passenger directors speaking different languages are on duty. Each station has a corps of red caps and a Traveler's Aid Representative.

Ticket Agents giving information to passengers through Chicago, should keep in mind that if trains are late endangering close connections at Chicago about 45 minutes may be saved by transferring to Eastbound trains at Englewood, when incoming train runs via that station, as follows:

Passengers arriving Chicago from the West via the Rock Island Lines may change cars at Englewood Station, (when going East) and from the same station take the trains of the New York Central, Pennsylvania Lines or Nickle Plate Lines.

Passengers arriving from the West or South via the Illinois Central may change cars when going East or South and from the same station take trains of the Michigan Central or Big Four.

Passengers from either Rock Island or Illinois Central may change cars at 63rd Street and by short street car ride connect with trains of the Chesepeake & Ohio, Chicago & Eastern Illinois, Monon, Erie, Wabash, Baltimore & Ohio and Pere Marquette.

EXPORT—IMPORT DEPT.

By A. C. HEDLUND,
Foreign Freight Agent

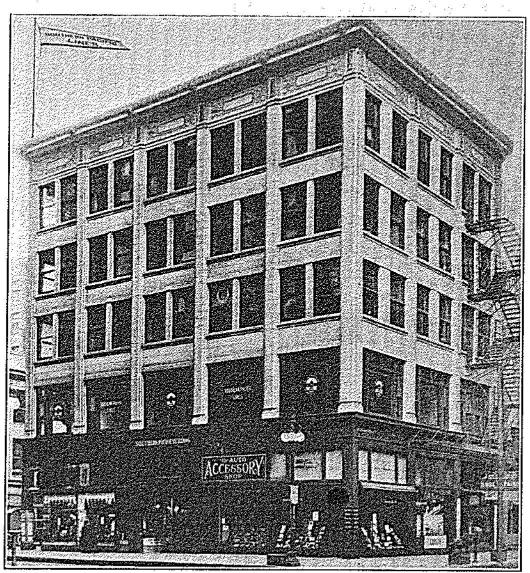
IN the exportation and importation of freight, by reason of their dissimilarity to domestic shipments, we can be of great assistance to our patrons. This is particularly true of those customers who do not maintain a foreign trade bureau and are, therefore, not familiar with the various requirements and intricacies of this part of transportation.

On export business we issue the rail permits for shipments to move to port of export; make reservation for space in ships sailing from such port, where required to do so; inform shippers as to export and declaration papers that it is necessary for them to make out and send, frequently aiding them in making these papers up; make up their export bills of lading and make collections of rail and ocean charges. Cooperating with our representatives at sea ports, a similar procedure is followed on import business.

Silk trains or cars enroute from the Orient via port of San Francisco to Chicago and points east are watched by us from time of departure until arrival at Chicago, and traced by us through the yards to insure their quick dispatch via our eastern connections.

Particular care is taken of shipments in bond and carloads in bond where partial shipments are unloaded at Chicago.

HOME OF THE S. P. AT CHICAGO



Southern Pacific Building, Jackson Blvd. and Dearborn St., Chicago.

By HAZEL A. SHAUGHNESSY,
Secretary to General Agent

THE Southern Pacific Building is strategically located on the corner of Jackson Boulevard and Dearborn Street. Jackson Boulevard is the main east and west thoroughfare of the city for automobile traffic, while Dearborn Street is one of the main north and south arteries.

Our building faces on Jackson Boulevard, diagonally across Jackson Boulevard from the post office. It is but two short blocks west to the Consolidated Ticket Office, two blocks from the Chicago & North Western Ticket Office and within a short walking distance of all railroad stations.

The principal hotels, which are the Blackstone, Congress, Sherman, LaSalle, are within a few blocks of us, while the Great Northern is across the street. One block east is the corner of State Street and Jackson Boulevard, which is said to be the world's busiest automobile corner, and, as is well known, on State Street are located the finest department stores in the world.

FREIGHT DEPARTMENT

By T. H. McMENAMIN, Chief Clerk

THE work of the Freight Department of the Chicago General Agency compares with the General Freight Departments of the home lines in Chicago. While the working force is not as large, the duties performed are identical, with the additional duties of solicitation.

For the purpose of solicitation, the City of Chicago and suburbs is divided into three sections and covered by three traveling agents. Our territory outside of Chicago is covered by four traveling agents.

A complete file of freight tariffs is kept and freight rate department answers on an average each day forty requests from shippers for freight rates, not only to points on our lines but from points all over the country.

In addition to this we receive many requests from the general freight offices in San Francisco and Los Angeles for rates covered by tariffs which are not in their files covering shipments from eastern points. These requests are often for rates on shipments which moved two, three and four years ago. We are also the freight rate information bureau for practically all lines located here. They come to us for rates, rules and other information concerning business moving from or to points served by us.

The magnitude of our operations is best shown by the fact that we receive an average of 9750 pieces of mail monthly, necessitating the writing of about 3000 original letters and 400 telegrams. This is supplemented by the cutting and printing of 350 mimeographic stencils and the mailing out of about 16,000 pieces of mail, not including a daily average of 500 notices of passings and arrivals sent out by our manifest department.

The adjustment of claims is handled by Fred A. Miller, special representative of W. C. Fitch.

TELEGRAPH DEPARTMENT

By W. G. RICE,
Telegrapher

THE Telegraph Department renders an important service in the Chicago General Agency as well as to all neighboring general agencies and the Pacific Fruit Express, whose eastern headquarters are in Chicago. Service to all points on the Southern Pacific System is provided with direct wires to New York, New Orleans, Houston, and via Houston to San Francisco. A large interchange of telegrams is carried on between the Southern Pacific Lines and foreign lines at this point.

The work of the Telegraph Department is coordinated with all other departments. During the year 1922, 25,298 wire sleeping car reservation requests from various system offices were received by us and 175,581 telegrams were handled. The first quarter of 1922 averaged 12,665 per month. The first quarter of the year 1923 the average per month was 15,566.

Three men are employed with three shifts and practically 24-hour service is rendered.

LISTON APPOINTED GENERAL AGENT AT INDIANAPOLIS

Lyon Liston, who for many years has been connected with the Southern Pacific, most of the time in eastern territory, has been appointed General Agent at Indianapolis.

Mr. Liston began railroading as a telegraph operator and served successively as a relief agent, train dispatcher, clerk to General Manager, and during period of Southern Pacific and Union Pacific consolidation was a traveling agent.

Mr. Liston points out that he is a long way from the rails of Southern Pacific and that he has a large work before him; but that he counts on the cooperation of every member of the Southern Pacific family to help him "put it over."

MINNEAPOLIS AND ST. PAUL THE "TWIN CITIES"

By EDWARD BURGER,
Traveling Agent

MINNEAPOLIS with a population of 380,000 and St. Paul with a population of 234.000 popularly known as the Twin Cities are located at the head of Navigation on the Mississippi River. They are the gateways to the Central Northwest and are the manufacturing, wholesaling, financial and educational centers of a large territory consisting of Minnesota, North and South Dakota, Montana, northern half of Wisconsin, northern half of Iowa and upper Michigan.

Nine trunk line railroads, Chicago, Rock Island & Pacific; Chicago, Milwaukee & St. Paul; Chicago, St. Paul, Minneapolis & Omaha; Chicago, Burlington & Quincy; Chicago Great Western; Great Northern; Minneapolis & St. Louis; Minneapolis, St. Paul & Sault Ste. Marie and the Northern Pacific, serve this large territory with the Twin Cities as their center, the importance of which is best shown by the following outline of daily through passenger train service:

15 trains daily to Chicago.
6 trains daily to Omaha.
4 trains daily to Kansas City.
4 trains daily to St. Louis.
9 trains daily to Duluth.
3 trains daily to Winnipeg.
7 trains daily to Pacific Northwest.

Daily through standard sleeper is operated from the Twin Cities to Los Angeles on the Golden State Limited.

Both Cities have many large parks and are famous for their boulevard drives along the picturesque Mississippi River. They are the gateways to the Minnesota region of Ten Thousand Lakes which are well known to sportsmen and vacationists throughout the country. Minnehaha Falls, the scene of Longfellow's poem, the "Song of Hiawatha" are located in Minneapolis.

The territory tributary to the Twin Cities is largely agricultural and produces largest quantities of grain, principally wheat and flax for which the Twin Cities have huge storage facilities. Minneapolis is the largest flour milling center in the world, mills having a daily capacity of ninety nine thousand eight hundred and sixty barrels of flour.

Minneapolis also is the world's largest producer of linseed oil mills, having a storage capacity of fifteen million bushels of flax and a yearly production of seven hundred fifty-three thousand barrels of oil and two hundred ninety thousand tons of oil cake.

Minneapolis has large plants engaged in the manufacturing of paper, cereals, furniture, chemicals and food products.

St. Paul's leading industry is meat packing. All large packers have plants there. Other important industries of St. Paul are engaged in the manufacture of sulphate of ammonia, refrigerators, paper, wall board and syrup.

The Ford Motor Company, in line with their new policy of decentralization will build a large assembling plant with a capacity of seven hundred cars per day; also a large plant to manufacture various Ford parts. Power development from a dam in the Mississippi River will be used to operate the plant. It is stated that when complete, the plants will employ 14,000 people.

The industries of the Twin Cities also manufacture many of the country's leading lines of farm, sawmill, electrical, road grading and hoisting and derrick machinery. The fabrication of structural steel is also an important industry.

The Twin Cities during 1922 received and forwarded over 900,000 carloads of freight.

MILWAUKEE

By J. J. KANE,
Traveling Agent

MILWAUKEE has a population of close to half a million (457,147 last census). It is a great manufacturing center—the largest for its size in the world. Manufactures include machinery of all kinds, tinware and enameled-ware, automobiles, trucks, shoes, furniture, knit goods, hosiery, trunks, motorcycles, wheelbarrows, soap, gloves, malt syrups and beverages. Milwaukee claims a greater variety of industries than any other city in the world.

Milwaukee is the greatest machinery manufacturing center in the world; has the largest tinware and enameling plants in the world; the largest exclusive truck manufacturing plant in the world; the largest tanneries in the world; the largest manufacturer of sawmill machinery in the world.

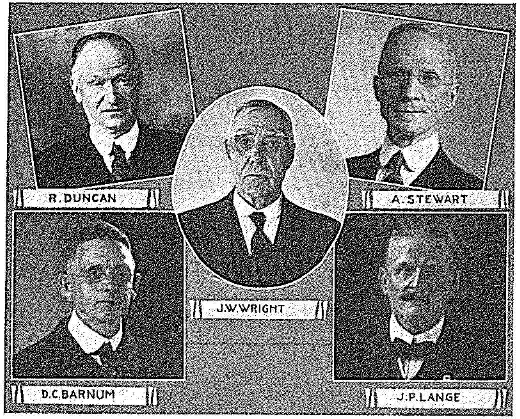
Milwaukee has the only plant in the world that designs, constructs and installs complete power machinery of every size and type, all built in the same shops and under the same management.

Milwaukee leads the world in the manufacture of silk hosiery; leads the nation in the manufacture of work shoes; is the largest wheelbarrow manufacturer in the U. S.; is the largest producer of toilet soaps in the U. S. and has one of the largest plants in the world manufacturing motorcycles.

Milwaukee builds the largest steam and water turbines in the world; has the largest manufacturer of steam shovels, dredges and excavating machinery in the United States; the largest crane and hoist manufacturers in the United States.

There is a great volume of traffic moving from Milwaukee to our territory as well as all over the world. Milwaukee is also a great lake port—the greatest on Lake Michigan—and is open all year.

41 S. P. VETERANS ARE RETIRED



Veterans recently pensioned with more than forty years service. Photographs of Wm. Mountain, Arthur Weston and Daniel D. Rowlands did not arrive in time to be included in this group.

JOHN W. WRIGHT, Engineer on the Sacramento Division, with 49 years 6 months service to his credit, heads a list of 41 veterans just recently retired on the Southern Pacific's "Honor Roll" of pensioners.

There are eight veterans on the list who had over forty years service and seventeen who have been continuously employed with the Company for over thirty years.

Mr. Wright, whose home is at Rocklin, is one of the best known trainmen on the Sacramento Division. He went to work as a wood watchman at Rocklin on August 12, 1873. Five years later he entered the train service and in May 1879 was promoted to engineer. His first passenger train run was on the old train No. 3 and No. 4 which was the second through passenger train put on by the Company via Ogden.

Second on the list in point of service is John D. Isaacs, formerly Consulting Engineer, whose interesting career with the Southern Pacific was outlined in the June Bulletin. Mr. Isaacs has a service record of 48 years 3 months.

Daniel C. Barnum, Engineer on the Stockton Division, is retired with 48 years 1 month service. He went to work for the Company as a helper in the roundhouse at Sacramento on October 16, 1874, and was later employed in various capacities as a trainman at Red Bluff, Oakland, Tucson, Ogden, San Francisco and Dunsmuir. His home is in Oakland.

Archibald Stewart retires from his post as Ticket Collector in San Francisco after 47 years 4 months service. On December 14, 1875 he went to work as a clerk in the warehouse at Mountain View and was later Agent and relief Agent at Sargeant, Coyote, West Alameda, Walnut Creek and various other points until January 1919 when he was transferred to San Francisco.

John P. Lange, Dock Foreman for the Southern Pacific Atlantic Steamship Lines, was employed at Algiers, La., from September 1878 to January 31, 1923 retiring with a service of 44 years 5 months.

After 42 years 3 months service, William Mountain, Lead Boilermaker in the shipyard at West Oakland, is retired on the pension roll. He entered the service August 16, 1880 as Foreman Boilermaker in the West Oakland roundhouse. In 1911 he was made Foreman Boilermaker in the ship yards where he remained until his recent retirement.

Arthur M. Weston entered the service July 5, 1881, as a Conductor on the Sacramento Division and was continuously employed in that capacity until June 1, 1923, when he was retired with 41 years 11 months service.

Daniel D. Rowlands, Locomotive Engineer on the Salt Lake Division with headquarters at Ogden, is retired with 41 years 2 months service. He had been in continuous service since April 1881.

Others on the list who have had less than 40 years service represent some of the best known veteran Southern Pacific railroaders.

RAILROAD FARES ABROAD HIGHER THAN AT HOME

There is a widely prevalent belief in this country that the cost of railroad transportation is considerably less in countries of Europe than it is in the United States and that belief has been encouraged by agitators for government ownership.

But the fact is directly contrary. Cost of travel by railroads in Europe is much in excess of that in this country. That is convincingly demonstrated by a comparison of fares over certain distances in the United States with fares over approximately the same distances in countries of Europe. For instance:

The fare from Jackson, Miss., to New Orleans, a distance of 183.1 miles, is $7.13. The fare from London to Manchester, in England, 183.5 miles, is $11.07.

The travel from Memphis to Vicksburg, 221 miles, costs $8.59. From Paris to Liege, in Belgium, 228 miles, the fare is $14.51.

Fare from St. Louis to Chicago, 294.2 miles, is $11.24. From London to Carlisle, in England, 299 miles, it is $19.59.

From Chicago to Fort Dodge, Iowa, 374.6 miles, the fare is $14.89. From Paris to Geneva, in Switzerland, 375.9 miles, it is $25.68.

From Sioux City, Iowa, to Chicago, 509.6 miles, $20.15. From Paris to Biarritz, in France, 507.3 miles, $32.60.

From Chicago to Memphis, 526.7 miles, $21.15. From Paris to Milan, 522.5 miles, $47.59.

From Birmingham, Ala., to Chicago, 689.2 miles, $25.62. From Paris to Venice, 687.2 miles, $61.39.

From Chicago to Jackson, Miss., 737.4 miles, $29.34. From Paris to Florence, 731.3 miles, $54.45.

From Louisville to New Orleans, 787.4 miles, $30.11. From Paris to Prague, in Czechoslovakia, 786 miles, $93.13.

In the foregoing comparisons, the foreign fares are translated into their equivalent in American money, on the basis of normal rates of exchange.

The figures speak for themselves. They show that railroad transportation is much cheaper in the United States than it is in the best situated and conditioned countries of Europe. —Albany Journal.

ACCOUNTANT'S CONVENTION

The next annual convention of the Railway Accounting Officers' Association will be held in San Francisco in June, 1924. F. W. Pope, Auditor of Freight Accounts, and O. F. Giffin, Auditor of Passenger Accounts for the Southern Pacific, attended the recent convention at Richmond Va.

Ten Reasons Why People Fail

Paul Shoup Says Benjamin Franklin's Rules of Conduct Hold Counsel for Success

ONE way to win success is through knowledge and avoidance of the causes of failure. Consequently ten reasons "Why People Fail," given by Paul Shoup, Vice-President of the Southern Pacific Company are interesting.

Mr. Shoup was asked by a writer in the Los Angeles "Times" to give his views as to why people fail. Mr. Shoup, in granting the request, said:

"I doubt if I can add anything at all to the sum of human knowledge as to why people fail, but in the attached memorandum I can repeat some of the things which in one form or another have been made familiar to every person who is able to read.

"I would not attempt to classify the qualities which make for a good motorman and might not necessarily make for a good mathematician.

"As a matter of fact I sometimes think there is too much preaching on these subjects and that a good example exerts about the only influence that has very much weight. The people who know 'Mr. Jones' and believe in him and look upon him as a success may be directed by his example, but the people who do not know 'Mr. Jones' have little regard for his suggestions which they look upon largely as expressions of self-satisfaction."

The reasons for failure given by Mr. Shoup are as follows:

1. Lack of sustained industry.
2. Failure to save systematically, which means lack of thrift.
3. Inability to concentrate, which is merely a bad habit of mental laziness or lack of intensive mental industry.
4. Failure to follow through. In business a good many people seem unable to reach a destination.
5. Inability to distinguish the relative importance of subjects that constitute one's work. Many men who are masters of detail in the end become mastered by detail—and detail is nevertheless of the highest importance.
6. Likewise business masters many men instead of men mastering business, with result that they are unquestionably on the defensive always using only that which comes to them where with broader vision they might seek and find more worthwhile.
7. Business success is based absolutely on the strictest honesty, intellectual as well as financial. He who deceives, dissembles, evades, or seeks to "put one over" merely places obstacles in his own path of work on his road to success.
8. Procrastination is a thief of success, perhaps the greatest thief of all.
9. Ill health, physical and mental, often self-cultivated, makes for failure.
10. The round peg in a square hole is a misfit that should be remedied.

You ask me about what qualities make good motormen and how they would differ from some other class, say, good scientists. The preceding suggestions apply to both. The power of observation must also be possessed by both. Both should desire to make progress as time goes on. The demands of the work with respect to the motorman make him deal with matters concretely; in some lines the scientist using the word in its largest sense, might deal abstractly.

As for rules of personal conduct that lead to success I can only suggest that you refer to Benjamin Franklin's autobiography and the rules he therein laid down for his personal government. Anyone following them should be successful.

H. B. SMITH, TAKEN ILL ON VACATION, PASSES AWAY

H. B. Smith, Head Clerk Miscellaneous Bureau in the General Passenger Department at San Francisco, died June 20, following a brief attack of pneumonia. Mr Smith was taken ill while on his vacation and was hurried back to the Company Hospital where every effort was made to combat the sickness which had been contracted so suddenly.

Mr. Smith entered the service of the Southern Pacific as a stenographer in the passenger department on October 5, 1904. In April 1908 he was promoted to secretary under General Passenger Agent Jas Harsburgh, Jr., and in December of that year was appointed colonization clerk. September 1, 1920 he was appointed the position held at the time of his death.

His home was in Berkley and he is survived by his wife and nine year old son, Phillip.

Veterans Recently Retired on "Honor Roll"

Name	Occupation	Location	Service Yrs.	Mos.
John W. Wright,	Locomotive Engineer	Rocklin, Cal	49	6
John D. Isaacs,	Consulting Engineer	New York	48	3
Daniel C. Barnum,	Locomotive Engineer	Oakland, Cal.	48	1
Archibald Stewart,	Ticket Collector	San Francisco	47	4
John P. Lange,	Dock Foreman	New Orleans	44	5
William Mountain,	Lead Boilermaker	West Oakland	42	3
Arthur M. Weston,	Conductor	Sacramento	41	11
Daniel D. Rowlands,	Locomotive Engineer	Ogden	41	2
Cyrus N. Gaines,	Apron Tender	Alameda Pier	39	4
James E. Knott,	Truck Builder	West Oakland	39	4
Robert Duncan,	Carpenter B & B	Oakland	38	1
Isaac T. Gibson,	Lead Coach Cleaner	Sacramento	37	0
John T. Cochran,	Machinist Helper	Fresno	36	8
David Scott,	First Officer	SS "Throughfare"	36	2
Alex T. Morian,	Brakeman	Portland	35	11
George R. Moore,	Freight Stevedore	Sacramento	35	8
Daniel A. Johnson,	Brakeman	Oakland	35	4
Jacob Zaff,	Carpenter	San Pedro	35	3
John Micander,	Locomotive Engineer	Dunsmuir	34	11
*Albert E. Harter,	Locomotive Engineer	Dunsmuir	34	10
Camilla L. Pendleton,	Assistant Chief Engine	Oakland	34	3
**William J. Shillings,	Car Builder	Sacramento	33	10
Egbert L. Bonney,	Locomotive Engineer	Oakland	32	9
Robert H. Avery,	Locomotive Engineer	Bakersfield	32	5
Thomas McCord,	Conductor	Oakland	32	0
Fred Shaw,	Carpenter	Los Angeles	31	7
Cesar Bettencourt,	Ferry Ticket Seller	San Francisco	28	11
Antone Pacheco,	Crossing Watchman	Oakland	28	7
Fred Sundell,	Track Walker	Boulder Creek	28	4
Oliver J. Coburn,	Section Foreman	Stockton	28	0
Frank McAlpin,	Plumber	Los Angeles	28	0
Fred W. Neave,	Ticket Collector	San Francisco	27	9
Thomas L. Carroll,	Conductor	Oakland	27	2
Joseph Monticelli,	Crossing Watchman	Dayton, Nev.	26	5
***John Esycheck, Jr.,	Conductor	Sacramento	25	8
Child Marshall,	Foreman Painter	Los Angeles	24	0
Joseph Raveilli,	Boilermaker Helper	Sacramento	21	9
Eli P. Cooper,	Pumper	Pacific Grove	21	9
Platt C. Vallejo,	Brakeman	Los Angeles	20	8
Hans Aaronsen,	Shop Carpenter	SS "Alba"	20	3
Minna Dennekamp,	Clerk	San Francisco	20	0

*Died March 22, 1923.
**Died February 5, 1923.
***Died February 16, 1923.

Railroad Problem as the Worker Sees It

Brotherhood Official in Plea for Financial Stability of the Railroads Says Welfare of the Employes Rests in Prosperity of Their Company

By W. N. DOAK

Vice President Brotherhood of Railroad Trainmen

W. N. DOAK, Vice President of the Brotherhood of Railroad Trainmen, delivered an address on "Financial Support for the Railroads" before the general session of the United States Chamber of Commerce at New York, May 10th. He presented the interest of the railroad worker in regard to the welfare and prosperity of the transportation companies and their attitude on government operation. A portion of his address is included in the accompanying article.

LABOR'S interest in adequate financial support for the railroads must be apparent to all. Too often, however, labor is placed in an awkward position on this subject and frequently misunderstood.

What could be of more importance to a working man than to know that his wages will be promptly and properly paid when due for services rendered? What of more interest to him than to know he is secure in his employment, that his wages will be fair, his conditions of employment good and wholesome? Added thereto is the pride that comes to every loyal employe in knowing that his employing company is prosperous. Upon the financial stability of the railroad depend all of these desirable conditions.

The few railway employes who are not interested in the welfare of the property on which they are employed should seek other fields of endeavor. The representative of railway labor who seeks to wreck the railroads financially or otherwise is not a representative of the rank and file of labor and should be retired.

Based upon ill-advised action on the part of certain individuals, we have during the past few years been placed in a position of ostensible opposition to the railroads and industrial progress generally. It would be far better for sensible business men to weigh such problems just as they do any other business question—from the standpoint of facts, disregarding theories.

Mutual Interest

May I not therefore repeat that the average railroad employe is just as vitally interested in proper financial support for the railroads as any other citizens of this country? As proof of this statement, may we not make an appeal to you financial and business men of America to stabilize railroad securities, stocks and bonds, freeing them from unnecessary speculation by putting them on as sound a basis as you would your own individual securities, waiting to see how much the railroad employes will invest in the business from their earnings?

Let us learn to live and let live by treating the railroads fairly, by being fair to capital, fair to labor, by being fair to ourselves. Be not deceived into the belief that we can starve the railroads, speculate in them to the dangerous degree, wreck their credits, pay inadequate wages to management and employe, and expect a healthy transportation system.

Seemingly for the last ten or fifteen years every time the railroad employes have been forced to seek relief from rising prices or other conditions by asking for increases in wages or better working conditions from the managements, or have by legislation sought to mitigate dangerous conditions, they have been confronted with the solemn declaration from some quarters that we were trying to bankrupt the railroads.

When the railroads have sought relief through rate increases, the employes assisting, they have been charged with collusion to rob the public. More often, however, the so-called reformer has charged us both with being dangerous to society and suggested our annihilation. Unfortunately there are so many believing these rumors that the frightful execution has already begun, and unless it is stopped the transportation industry will be destroyed and the most efficient industrial organization on earth will be wiped out.

Seemingly the farmer, the shipper, the merchant and all other classes of our citizenship reserve unto themselves the right to say what they please about the railroads. If objection is raised by anyone, that person becomes the subject of ridicule and public scorn. We have a Federal Government and forty-eight state governments that must say something about how railroads are run, as well as the exercise of police powers and the right to tax them. The reformer must have a theory, a ticket on which to ride into office; so he usually picks the railroads as the best plank for his platform.

Government Ownership

Does railroad labor believe in federal ownership, control or operation, is a question asked so many times by the general public. My answer is "No". None of these are desirable, nor should any of them be resorted to except as a last resort. Many of the public have been told and many believe that the railroad employes as a whole have endorsed government ownership and tripartite control. It is true that a number of organizations at one time declared in favor of such a plan; however, ours did not, because we found it objectionable and, generally speaking, unsound, being purely an untried theory.

The majority of railroad employes want freedom of action and the right to deal with their employers, through their regularly constituted committees and representatives rather than being governed by boards or commissions. As we have understood, all of the plans so far advanced would, to a greater or lesser degree, take away from management and men the ultimate right to settle their problems at home and substitute a centralized plan, the operation of which in its finality would center in a government board. When this became apparent, we as officers on behalf of the organization, disagreed and withdrew from any further cooperation in this direction.

Since that time other organizations in engine, train and yard service, we understand, have declared in favor of the old plan of mediation, conciliation and arbitration for the adjustment of disputes_which, in so far as the one feature of the subject is concerned, is favorable to decentralization. As to other groups I cannot say what their ultimate object will be.

Our great trouble lies in the unfortunate fact that there are too many well meaning agencies causing duplications and acting at cross purposes trying to handle the railroad situation.

Cordial Relations

In passing let me set at rest any thought that the management of the railroads is held in disdain by the railroad employes or that there is any great friction between the two. The most cordial relations exist and the most wholesome respect and goodwill is entertained one for the other.

There is today, in so far as we are concerned, no trouble of any kind with the management, neither is there any friction. This, then, seems to be the time when we can and should discuss the general subject.

If the amount of time, money and printer's ink wasted by the railroads and the employes in telling of the mean things the other was capable of doing, to which could be added the efforts of other bodies and organizations in taking sides with either of them, had been put into the railroad business we would be far along the road to the adjustment of our difficulties. The sooner we realize that we can be each other's best friends and most helpful aids or that we can be the most harmful enemies, the better off we will be. In days gone by, we have been at each other's throats so much in the public imagination—while in reality it has been so little—that people generally think what we have said about each other is true.

Were we to spend less time in agitating the public mind toward the enactment of compulsory arbitration laws and other stringent regulations of the railroads and more time in educating the public to an appreciation of the fact that the railroads and their employes need sympathetic assistance in their efforts to furnish transportation, we would be a quarter of a century advanced in less time than we could imagine.

Salaries and Wages

A word should be said as to salaries and wages paid by the railroad as compared with other industries, for the reason that it may have some bearing on the trend of thought of a great many in discussing the financial problems of the railroads. Name any other industry or corporation, in which so much is invested, where the responsibilities are as great as those of a president or other high operating official of a large railroad system, and compare its officers' salaries with the salaries of these railroad officials for the proof of the reasonableness of railroad salaries.

Consider the skill required, the hazards of employment, the discipline, the physical requirements, length of industrial life and responsibilities, in connection with the wages paid railroad employes in comparison with the same conditions and wages of employes in any other industry and you will readily see that railroad employes are not overpaid.

The farmers and rural inhabitants have been greatly misinformed with regard to railroads and more especially as to railroad finances. The average rural inhabitant has been importuned to believe that the railroads are gigantic monstrosities, that the railroad employes are the reddest of the Reds, and that they two are taking away from the farmer everything he possesses. We might retaliate by claiming that during the last few years we have had sufficient cause to believe there were others, especially when purchasing what we constantly need from the markets.

Farmers Misinformed

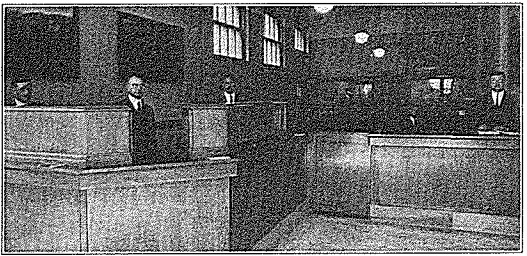
A great deal of good can be accomplished by the railroads' and their employes' going to the rural communities with a joint appeal for fair dealing for the transportation industry. Just why we have not done this is a mystery, answerable only in one way; that outside interference has driven the employer and employe farther apart instead of closer together. It should be made known to the rural inhabitants that the railroads and their employes must live; and the false theory should be exploded that they are robbing the farmer.

The banker is the one man above all others who should sense the danger ahead of us in the transportation industry, and we may safely assume that he does. It seemingly would be most commendable were the organized bankers to take an active part in readjustment of railroad securities and in placing this industry on a sound financial basis.

Much has been said regarding the great number of bills that are being introduced from time to time in Congress and the state legislatures affecting the railroads, many of which are introduced at the solicitation of railroad employes; others at the solicitation of the railroads themselves, but all having as their object the limiting or restricting of the activities of railroad employes or others. This we may reasonably expect to continue unless and until a more thorough understanding is had by all parties concerned, and unsafe conditions of employment and many other ills are disposed of through mutual negotiation and understanding.

Legislation is generally expensive and a burden upon the railroads, and much waste could be eliminated if the financial conditions of the railroads were on a sound basis and many subjects that are now dealt with by legislative bodies were handled in a business-like manner.

NEW HOME OF S. P. AT SEATTLE



Interior of the new Southern Pacific office at Seattle.

SOUTHERN PACIFIC has opened a ground floor office in Seattle on what is locally referred to as "Seattle's New Railroad Row."

The location at 314 Union Street, between Third and Fourth Avenues is particularly favorable. It is in the center of Seattle's thriving retail, theatre and hotel district.

"Railroad Row" in Seattle has moved from the old Totem Pole location, which was the center of old Seattle, fully a mile northward where apparently, the retail district of that city is to be permanently situated.

The new office is equipped in true Southern Pacific form, the furniture and furnishings being of light oak; the ticket counters are Southern Pacific model with all conveniences for prompt and efficient service to patrons.

On the walls are displayed photographic enlargments of some of the major attractions along the Southern Pacific Lines, including Mt. Shasta, Yosemite National Park and the Apache Trail.

An attractive Southern Pacific medallion set into the tiling at the entrance, with large front window space, gives the office a cheery appearance.

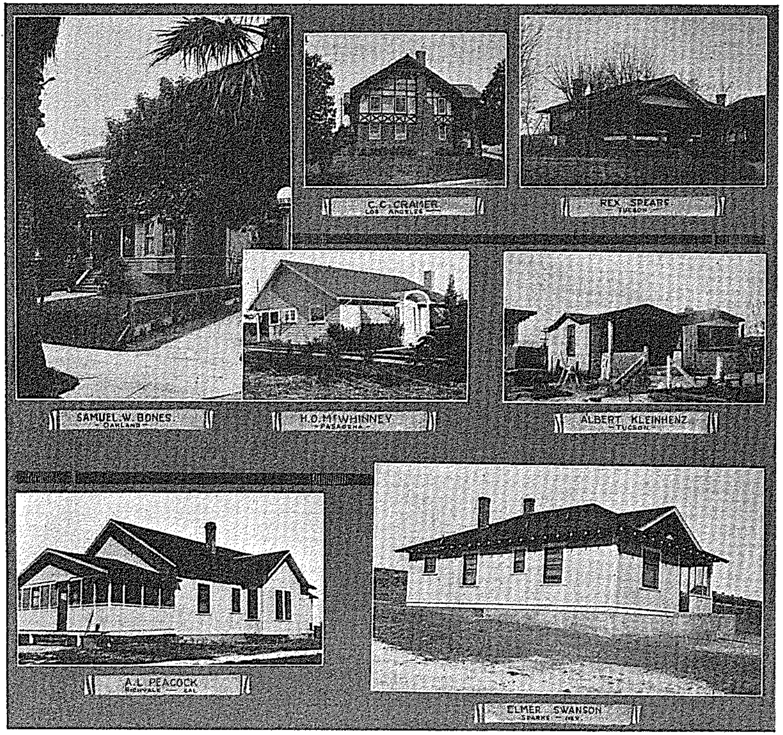
The Seattle District Freight and Passenger Agency looks after the business of the Company, not only in Seattle, which is a city of more than 350,000 inhabitants, but includes the state of Washington, most of British Columbia and Alaska.

The Seattle District is presided over by C. M. "Charley" Andrews, District Freight and Passenger Agent, who has the following staff:

B. C. Taylor and L. A. Brockwell, Traveling Agents; C. M. Biggs, Freight Agent; Wm. Sutherland, Passenger Agent; J. K. Choate, Jr., Chief Clerk; H. M. Prestridge, General Clerk; A. N. Bryant, Ticket Agent; S. G. Wilkinson, Ticket Clerk; S. F. Gorseth, Steno-Clerk; H. G. Ruehlen, Junior Clerk; and J. A. Dowie, Stenographer.

The Seattle organization is imbued with the idea of rendering the best of service to our patrons and they are courteously and aggressively putting forward the attractions and facilities of Southern Pacific Lines to patrons in the northern cities. The organization enjoys a wonderful and pleasing esprit de corps.

HE PROFITS MOST WHO INVESTS IN A HOME



A few more of the attractive homes of Southern Pacific employes.

SKILL BUILDS HOUSE, BUT LOVE MAKES THE HOME

By H. O. McWHINNEY
Clerk, Pasadena, Calif.

HOME. What does the word mean? Webster says "One's own dwelling place. The abiding place of the affections. A place of refuge and rest."

According to Biblical history, when man first made his appearance on this earth, he was given a home or place of abode, but through disobedience of certain commandments he was banished and for all time since it has been man's lot to toil for his earthly possessions.

THE accompanying articles are written by Southern Pacific employe home owners. They tell briefly of the trials and pleasures incidental to acquiring their homes and are addressed in a spirit of helpfulness and encouragement to fellow-employes who are anxious to enter the home owning class.

The life of every nation is based on three great institutions, namely, the Church, the State and the Home. We must first select a permanent abiding place. Then we will look to the influences of the church and the state as spiritual and moral guardians of the home. Ever since the dawn of civilization the home has been the stabilizer of man's activities.

It has been said; skill may build a house but it takes love to make a home. I take it that we all love our wives and families, so begin today with providing them with the first and greatest institution of all civilized life.

The one who said that Pride goeth before a fall surely did not mean the honorable pride of owning a home.

What will it mean in our social and business life to own a home?

Permanency is one of the great factors in human progress and nothing will establish it surer than to own a few feet of old Mother Earth. We may have rich and costly possessions in other things but it is too easy to load them at the least whim and start in search of laurels elsewhere.

There is no disgrace in honorable indebtedness, but it might be a very unpleasant cause of regret if at the evening of life we suddenly realize that we have neglected to set aside something during our productive years.

My idea is to select according to our best judgment, combined with others better informed as to local conditions, a double lot away from the congested districts. Perhaps it will mean a little more sacrifice in the beginning but it will pay in the long run.

By doing so you will have room for flowers, garden and a few trees and plenty of fresh air and sunshine for the children. If necessary start with two rooms on the unit plan so later when the family increases you can add more units, but build substantially what ever you do. Later, after the payments are nearly completed you can borrow money on the original investment to help put up a second house on the vacant lot for income property.

Don't fail to remember that when the first payment is made on the original purchase that you will have a new vision of life and that your ambitions will go by leaps and bounds. You will be a better husband and father and a better citizen.

PENSIONER SAYS HOME IS NOW HIS SANCTUARY

By SAMUEL W. BONES
Retired Conductor, Oakland

THE beautiful thoughts expressed in the celebrated song, "Home Sweet Home," bring a thrill to my heart, for all the love and accomplishments from living a useful and happy life find expression in the home.

My wife designed the plans for our home and it was built in accordance with her wishes. The plans for five other homes were modeled from the interior arrangements she had devised. When our home was built 25 years ago I paid $200 down and the balance in monthly payments like rent. In nine years the entire amount was paid off.

Although my beloved wife has departed this earthly life, our home is to me a sanctuary and I am living in it alone, in my declining years, with the fond memory of the many happy hours we spent together.

There have been many convincing statements made in former articles during this "Own Your Own Home" campaign, ably expressing the advantages derived from owning a home. So I say to you, fellow-workers of the Southern Pacific, and I speak to you most emphatically, make every endeavor possible to acquire a home of your own.

Home the Center of Our Whole Social System

THE home is at last not merely the center, but truly the aim, the object and purpose of all human organization. We do not seek to improve society in order that from better homes we may bring forth better servants of the State, more efficient cannon fodder for its armed forces; rather we seek to make better homes in order that we may avoid the necessity for conflict and turmoil in our world. The home is the apex and the aim, the end rather than the means of our whole social system. So far as this world knows or can vision, there is no attainment more desirable than the happy and contented home."
—President Harding.

BEAUTIFUL HOME IS REWARD OF SHOPMAN'S SAVING

By C. C. CRAMER
General Shops, Los Angeles

IN 1907 I entered the service of the Southern Pacific as an apprentice in the paint department of the general shops at Los Angeles. Being desirous of building a future, I made the initial business venture by purchasing a lot on the installment plan, paying $10 down and $10 a month. Finally I had a small home built on the lot and as the months have grown into years I feel that some measure of success has rewarded my efforts.

In addition to the home I own an adjoining lot which I expect to build on in the near future, which place will be a continual source of additional income. My property is beautifully situated, adorned with shrubbery, flowers and a large variety of fruit trees.

DON'T LET PESSIMIST STOP YOUR HOME OWNING PLAN

By GUS HAMILTON
General Shops, Los Angeles

STOP talking about it, until you start building it, or the pessimist will say you can't.

I was told a year ago I could not drive a nail straight but since then I have driven a good many all the way in and I don't care whether they went in straight or not, I am not going to look.

One year will do a lot, while four will put you on easy street, look at these figures! $1000 to go; $100 down; $15 a month; $100 more for material; $40 average rent in California; $25 a month or $300 a year for improvements and $300 buys lots of material for building. Four years takes $500 from the principal and the interest to date and who couldn't pay off the rest at the rate of rent saving in at least five years of course. Then your greatest worry will be the $300 a year in your own pocket, for the other $15 a month will pay for all the light, gas, taxes and water besides the little repairs now and then.

This is dragging it out a bit but I have four nice rooms plastered complete, bath, screen porch 7x24 and plenty of room for garden.

Would be glad to correspond with a fellow-worker and to help him in any way to gain what I have. What's mine is my own and I've done it in one year.

BUILT HIS OWN HOME TO ESCAPE LANDLORDS

By A. L. PEACOCK
Agent, Richvale, Calif.

WHEN I was ordered to vacate our rented home because the landlord wanted to move in, I found it was impossible to rent another place under $50 that would serve the needs of our family. I decided then it was time I owned a home of my own.

A $50 payment was made on a lot and I started work on a six-room house. I was regularly employed nine hours daily so could only work before and after hours. Work was started late in August and in November we moved in so that rent money could be saved for building materials. All work on the house, except concrete, bricklaying and plastering, was done by myself and ten year old son. It required two years to complete the building for which we have since been offered $4000.

A mortgage made to cover cost of lumber was cleared before the house was completed. I also borrowed $600 from a Building and Loan Company. All inside woodwork, painting included, was done while occupied by a family of seven.

HAS WORKED OUT SYSTEM IN FINANCING THE HOME

By W. L. WURM
Agent, Lankershim, Cal.

I HAVE built three houses and the experience has given me some few worries and many pleasures. Only one was built by contract. My experience is that contracting is the better method. I expect to build another house in the near future and it will be by contract from excavating to wall paper.

One was a frame house and the other two of hollow tile construction. The next one will be frame with stucco interior. I bought the site for the first house and then paid half cash down, borrowing the other half from a bank. In the second venture I paid cash for both the lot and building, and the same in the third. My next place will be built under a different financing plan. I own the lot and will build the house with as little cash outlay as possible. I will borrow the entire price of the house if possible, as I find I can make considerable over seven or eight per cent with my cash.

I expect to build a duplex the next time so some one else will be paying me rent to take care of my monthly or quarterly payments. At present I am paying $45 for three rooms and bath.

PAYMENTS ON A HOME LIKE SAVINGS BANK DEPOSIT

By ELMER SWANSON
Night Gang Foreman, Sparks

WE paid rent for more than four years, ranging from $25 to $40 per month, and it was when our landlord informed us that the rent of the apartments we occupied would be raised to $50 on the first of the next month, that we decided to build a home of our own.

The only misgivings that I have is that our rent was not increased to $50 four years before. I have often thanked our former landlord for his assistance in arousing us to such a point of action as he did.

It is true that we are still paying $50 per month on our home, but it is just like paying that amount into a savings bank. These payments will finally revert back to us, while money

I do not know of a better investment or a better plan of thrift than the purchase of a home on the installment plan. The benefits are so self evident that I can conceive of no reason why any man would hesitate in 'moving out of the rent-paying class.

Consulting Engineer

CARROLL R. HARDING

CARROLL R. HARDING has been appointed Consulting Engineer for the Southern Pacific Company with headquarters at New York. This position was made vacant by the recent retirement of John D. Isaacs.

Mr. Harding's entire railroad service has been with the Southern Pacific. He graduated from Cornell University in 1910 and in 1913, after being engaged by the American Bridge Company and on surveys in Alaska, Michigan and Costa Rica, accepted a position as Draftsman with the Southern Pacific at New York. In February, 1914, he was promoted to Chief Draftsman and in November, 1916, became Assistant Consulting Engineer. He was born at Hallowell, Maine, July 4, 1888.

Mr. Harding is President of the Cornell Society of Engineers and a member of Tau Beta Pi. He is also a member of American Society of Civil Engineers, American Railway Engineering Association and the Railroad Club of New York.

S. P. PEOPLE AT SPARKS IN ANNUAL PILGRIMAGE

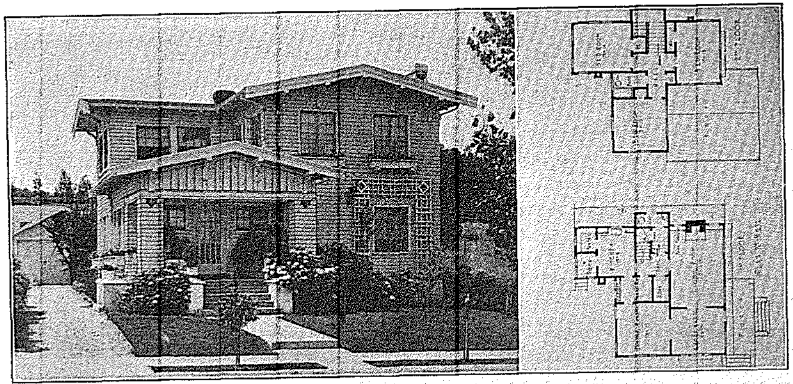
The annual pilgrimage of Southern Pacific folks at Sparks to the former terminal point at Wadsworth was again observed this year on Decoration Day.

Many of the older employes have relatives and friends buried in the cemetery at Wadsworth and for several years it has been the custom to run a special train to the former terminal town where the day is divided between a fitting observance of Decoration Day and enjoying a day's recreation.

Transportation was furnished by the Company and the train and engine crews donated their services. The crew handling the train this year included: Engineer J. W. Swaney, Fireman Geo. Rudy, Conductor O. M. Close, Brakeman J. H. Jones and R. A. Wilcox.

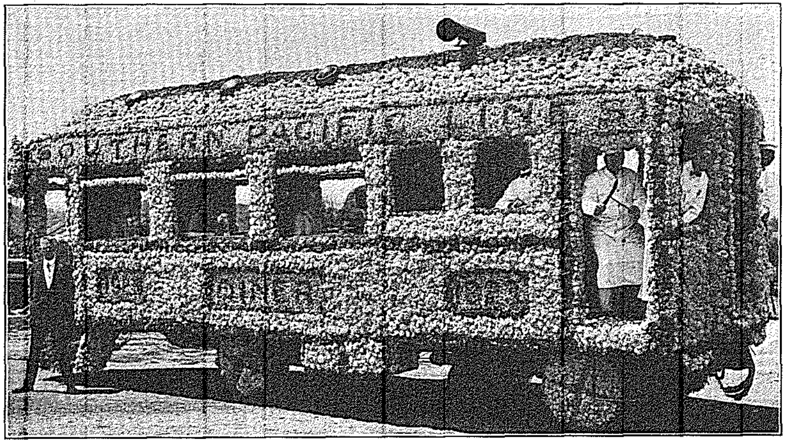
Teacher—"Johnny, what is velocity?"

Johnny—"Velocity is what a fellow lets go of a bee with."



This is another of the series of modern homes and floor plans which have been appearing each month in the Bulletin. Detailed working drawings of this home may be obtained from the National-American Wholesale Lumber Association, 620 S. Michigan Blvd., Chicago, for $1.50. Other plans will appear in subsequent issues of the Bulletin.

S. P. HAS PRIZE FLOAT AT ROSE FESTIVAL



The beautifully decorated Southern Pacific float that was a prize winner in the Portland Rose Festival.

A MINIATURE Southern Pacific dining car float, profusely decorated with roses, daisies and evergreens, was awarded first prize in the annual Rose Festival parade at Portland on June 14. The award came as a crowning success to the enthusiastic interest taken by the Portland employes in building and decorating the float which stood out unique and beautiful in a long line of other attractive displays.

The queen of all flowers, the Portland rose, was used in profusion in the decorative arrangement of both outside and inside of the car. A solid mass of LaFrance roses formed the sides of the exterior and panels of white daisies extended out distinctly from a background of pink. Inserts of daisies along the sides of the car were outlined by crimson rambler roses and the words "Southern Pacific Lines—1923—Diner" formed by the crimson flowers.

Every piece of mechanism used on a Southern Pacific diner was reproduced on the float and glorified by coverings of roses and ferns. Evergreens were used in carpeting the steps and platforms of the car and coverings of moss lined the windows. Wheels of the diner were formed by lacy branches of evergreen, and bouquets of roses tied with chiffon ribbons were placed in the windows and about the car.

At a table placed at each of the six windows sat charming young ladies with their escorts, all employes of the company offices at Portland. Southern Pacific waiters and cooks served their guests during the progress through the street. A feature of the display was furnished by the young people in the car throwing "after dinner" mints to the crowd as they passed. These mints were done up in glassine packages, on which was printed the Southern Pacific medallion and compliments of the Southern Pacific Dining Car Department.

Those who acted as guests in the car were: Miss Izma Bailey, master mechanic's office; Miss Carmelita Poole, J. Magers, N. J. Normile and Wm. Pratt, superintendent's office; Miss Josephine Barba and J. J. McNamara, district storekeeper's office; Miss Helen Neimi and H. A. Johnson, general passenger agent's office; Miss Helen Jacobsen and Ed. Karg, Park Street station. and Miss Florence Benson, assistant purchasing agent's office.

"The float represented not only the Southern Pacific officially," says Superintendent E. L. King, "but also the workers who are the life of this large Company. Loyalty and faith of the officers and employes of the Portland Division was woven into this beautiful float, which was the medium of their expression to the public.

"The float was designed and constructed in the Freight Car Shops at Brooklyn under the supervision of D. M. McLaughlan, Master Mechanic, and F. E. Cavender, Master Car Repairer. J. D. Ruddinman, Painter Foreman, was directly in charge of the many willing workers. The task of McLaughlan, Cavender and Ruddiman was enlightened by the willingness and enthusiasm evidenced by their co-workers, and their evident desire that nothing should be left undone to insure the complete success of their undertaking.

"Too much praise cannot be given those who so willingly gave their time and best efforts in constructing such a remarkable creation."

SPARKS NEWS ITEMS

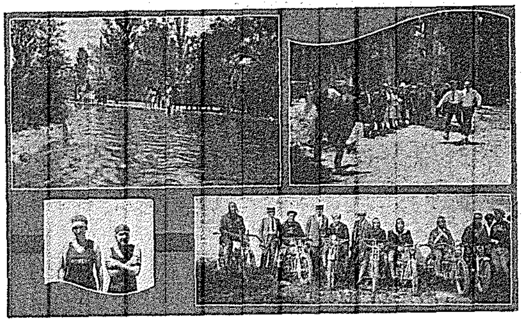
H. N. PAYNE.

Miss Hanna J. Flynn has accepted a position as stenographer in the general office at Sparks, relieving Miss Mervyle D. Funk who has been transferred to a newly created position in the Chief Dispatcher's Office.

M. E. Walsh, formerly car clerk, has been transferred to the position of record keeper. Frank D. Hallock is now car clerk. L. E. Bowden has been transferred from the yard office at Montello, Nev., to the file clerk position.

Mrs. Jeanne B. Smith has been temporarily appointed as trainmaster's clerk, filling the position made vacant by the resignation of Hoyt S. Ricketts.

Sparks S. P. Folks Hold Picnic



Snapshots at picnic of Sparks employes. Swimming pool where races were held; finish of three-legged race; entries in motorcycle endurance race; and winners of bathing beauty contest, Miss Erma Guffey at right winning first prize, and Mrs. Ardest Rule, second.

By H. N. PAYNE

MORE than three hundred shop employes of Sparks, Nevada, with their families and friends, motored to Bowers' Mansion June 2nd where a picnic and field days was held under the auspices of the Shop Crafts Protective League.

The program of athletic events was started at 11 o'clock and continued until about 1:30 when lunch was served. The afternoon was given over to dancing and swimming. Music was furnished by the Chase orchestra composed of Southern Pacific employes. Louis Chase, the leader, is the triple valve repairer at Sparks.

A feature was the ending of the 720 mile motorcycle race. Three of the seven contestants were Southern Pacific employes. Ralph Clay, machinist, and Bill Kelly, coppersmith, crossed the finish line with Pat Speer of San Francisco, making a perfect score in the endurance run. The prize money was split between them. Milton Reed, machinist apprentice, with his team mate Eddie Simmons, finished in fourth place. The winners covered the 720-mile course in 23 hours actual running time.

The athletic events were handled by J. E. Stone, assistant master mechanic, as head of the sports committee. Frank Hobson, locomotive painter, was chairman of the entertainment committee. The success of the affair is due to the efforts of these men and their assistants on the several committees.

Prizes for the various events were donated by local merchants. Winners were as follows:

Boys' race—Harry Firth.
Girls' race—Mildred Questa.
Men's race—H. W. Dieterich.
Ladies' race—Mrs. J. G. Williams.
Men's three legged race—R. Beardall and Herberth Fell, machinist he'pers.
Bathing Beauty Contest—1st, Miss Erma Guffey; 2nd, Mrs. Ardest Rule.
Tug of war won by the motive power department over the car department.
Standing broad jump—Louis Zuninni, blacksmith apprentice.
Boys' swimming race—Harry Firth.

NEWS NOTES FROM OGDEN

By F. J. BARTONEK

Miss Garnett Wilcox is back at her trusty "Burroughs" after a vacation trip to Los Angeles.

Mrs. Myrtle Chapman, the chaperone of the Comptometer Bureau, is spending her vacation in Yellowstone Park.

Mr. F. P. Naisbitt, Timekeeper, has obtained Leave of Absence and is vacationing in New York State.

Timekeepers, Ben Peterson and Robt. Tuffs, report the arrival of a son and daughter, respectively, at their homes.

A committee consisting of Mrs. Edna Clark, Miss Theresa Pring, A. W. Sheppard, L. J. Mann and B. C. Hillis of the Supt.'s office, Ed. Wright and J. P. Koster of the Material Accounts Bureau Ray Dow Dell of the Store Dept. and E. J. Watkins of the Master Mechanics office is making great preparations for an office employes' picnic to be held at Lageen, a summer resort midway between Ogden and Salt Lake, in the near future.

From the looks of the post cards P. Fred Planz sent the boys at the office he enjoyed the "scenery" on the beaches around Los Angeles.

Miss Marie Brophy, of the Stenographic Bureau is spending her vacation in Omaha.

Fred H. Chambers, I. C. C. Clerk in the Timekeeping Dept., has transferred to Train Rider under Special Agent Cordon.

R. B. Thomas, Division Accountant, is visiting his old home in Texas during his vacation.

Mr. W. H. Stotz, Trannmaster's Clerk at Montebello, has been transferred to M. P. & C. Timekeeper in this office vice H. J. McFarlane, transferred to Abstract Clerk in Division Accounting Bureau.

CUPID FINDS MARK IN THE PORTLAND S. P. OFFICE

The Superintendent's office, Portland, heard the chime of wedding bells twice during the month. The first time on June 3rd when Miss Theo Duncan, who has been employed as comptometer operator since September 1920, was married to Jack Murray. Mr. and Mrs. Murray will make their home in Eugene.

The second time was June 19th when Miss Bertha Eliason, clerk in the accounting Bureau, became the bride of E. O. Rickli, Agent at West Fork, Oregon. Miss Eliason was first employed in the Superintendent's Office in September, 1918, and Mr. Rickli has been with the Company since June 1916.

Shortly before Miss Duncan's marriage, Mrs. Lois Feery, head of the Calculating Bureau, entertained in her honor with a miscellaneous shower. About twenty-five girls from the Superintendent's office were present and the evening was spent in sewing and visiting.

On Tuesday evening, June 12th, the same girls surprised Miss Eliason with a miscellaneous shower. The Misses Alice and Betty Werren and Miss Kit Croak were hostesses for this affair.

Both Miss Duncan and Miss Eliason received many lovely gifts which will be of use to them in their new work of housekeeping. The good wishes of their fellow-workers go with them.

MANY CHANGES IN PORTLAND DIVISION YARDMEN

The following appointments of General Yardmaters and Yardmasters on the Portland Division have recently been announced:

General Yardmasters—J. G. Koening, Roseburg; R. W. Jackson; Brooklyn; A. L. Harrington, Eugene. C. B. Baker, Salem.

Yardmasters—W. W. Dickson, Albany; A. S. Wilson and F. L. Brown, Eugene; R. W. Fitzsimmons and F. V. Odekirk. Brooklyn; R. McMullen and F. O. Schultz, Roseburg.

ANOTHER AGENT SEES VALUE IN OLD BENT NAILS

Agent W. Marriman at the Kirkham Street station in Oakland is another agent who has interested himself and station employes in the economical practice of saving nails. Recently he forwarded 660 pounds of bent nails to the West Oakland store department which represented only part of an accumulation of fourteen months. A large portion of the nails removed from cars before loading with freight were straightened out and used in bracing and blocking less than car load shipments, as a means of protecting the freight from possible damage.

Team Work Meets Emergency

All Forces Unite to Maintain Comfortable Service During Blockade on Shasta Route

ABILITY of Southern Pacific to rise to any emergency, and the spirit of team work of all forces and among all departments of the company, were well evidenced during the period of one week between May 22 and May 29 when the Shasta Route was blocked on account of a fire in Tunnel No. 1 between Coram and Kennet.

Every effort was made to open the line in the shortest possible time by construction of a shoo-fly track around the tunnel, and to accomplish the transfer of passengers around the break in the line without discomfort or inconvenience. The shoo-fly was completed in seven days and 14 hours after the fire was discovered, despite the many difficulties incident to its construction. The manner in which the transfer of passengers was accomplished brought many words of praise from our patrons.

Fire in Tunnel One, caused by a marker lamp falling from an engine, was discovered early in the morning of May 22, and got out of control, with the result that the tunnel caved in. Deciding that the tunnel could not be opened in less than three weeks or a month, work was started on the shoo-fly the evening of May 22, and work was continued night and day until the line was completed. The shoo-fly was 1345 feet long. In this construction it was necessary to excavate 16,800 cubic yards of material of which 14,200 cubic yards were solid rock. It was necessary to haul from borrow pits at Coram and Motion 4,000 cubic yards of material to complete the fill at both ends. A total of over three tons of dynamite were used in blasting.

Comfort Looked To

Passengers, baggage, mail and express were handled by automobiles between Pollock and Redding. This transfer was accomplished without a single mishap or the loss of any baggage or express. Hand baggage of passengers was tagged and transferred by the company with such care and attention to detail that the passengers, on entering the train at the other end of the tunnel found their bags and suitcases in the same space and position in the cars as they had been in the train behind. Passenger Department representatives were on hand at all times to see that the transfer operated smoothly.

The Commissary Department was on the job in the same whole-hearted fashion as the other departments. Dining cars were kept open from 5 a.m. until as late as 11:30 p.m. No matter at what time the transfer was made, the passengers were able to take their meals on the south or north side of the tunnel. After the last passengers had left the trains, the dining cars were cleaned; the shades pulled down and the cars kept darkened until the arrival of the first bus load of passengers from the other side. No matter at what time this was, fresh coffee was made and a waiter notified the passengers that the dining car was open for their service. On entering the car they were pleasantly attracted by the cool and clean surroundings. In addition a waiter would go through the train with sandwiches and hot coffee. The cabinet cars were kept open night and day. Stewards went through the sleeping cars and coaches to pay particular attention to the needs and wants of the older people and children.

Fresh supplies for diners from the north were obtained at Dunsmuir and linen was laundered there. The dining car crews operating north of the tunnel were put to a severe test for the reason that in many instances they did not reach Portland, being in constant service, making it necessary that they load supplies shipped to them en route, in some cases as late as midnight. These unusual demands were all met and handled as part of the daily routine, the crews realizing they had an unusual condition to meet, requiring unusual effort. They accomplished this in a most satisfactory manner.

Freight Handling

No freight was transferred but all perishable freight, received and in transit before the line was blocked and embargoes were issued against receipt of freight for movement via Coram and Kennet, was detoured or diverted and shippers were informed of the movement. Oregon traffic destined to eastern points was accepted for movement via Portland and was not held for opening of the tunnel to move via the Roseville gateway. When the Shasta Route was opened there were some 1800 cars of freight accumulated at various points and as soon as the line was opened this was moved promptly and with no congestion.

When the line was opened there were 1657 westbound freight cars set out at sidings between the top of Black Butte Summit and Tunnel No. 1. It was arranged to clear all sidings which were blocked with these loads immediately on the opening of the tunnel by having each train manned with crews and engines. These loads had been placed in blocks so that there would be as little delay as possible on account of breaking trains up at terminals. Between 6 p. m., May 29 and midnight of the 30th, 30 hours, 16 west bound freight trains with 911 cars together with 14 passenger trains were put over the shoo-fly. May 30th, 20 freight trains with 996 cars and ten passenger trains were moved in and out of Gerber, and on June 1, 17 freight trains with 850 cars and ten passenger trains were in like manner moved over this territory, thus clearing up the accumulation of west bound cars delayed during the blockade.

S. P. BASEBALL TEAMS MEET IN SPEEDY GAMES

The baseball team from Superintendent Ahern's office at Sacramento seems to have the edge just at present on other teams from Southern Pacific divisions in California. However, the season is young and with the teams from Bakersfield, San Francisco and Los Angeles showing up in better form every week the Sacramento boys will be set a pretty stiff pace.

Before a large crowd of fans at Bakersfield on June 10, Sacramento defeated the San Joaquin division team by a score of 10 to 6. The following Sunday Sacramento annexed another game over the recently organized San Francisco Coast division team to the tune of 13 to 2. The Sacramento team has also been making a good showing in outside games and won the championship of a local league at Sacramento composed of six teams. The railroad boys went through the schedule without a defeat.

Durant recently pitched the Bakersfield team to a 9 to 3 victory over Los Angeles. Los Angeles lead until the eight when heavy hitting in the last two frames added 7 runs for the Bakersfield boys. The line-ups were as follows:

Bakersfield—Riley, cf; Cuneo, 2b; Voorheis, 1b; Marshal, 3b; Gibson, rf. Harris, ss; Meyernofer, lf; Turner, c; Durant, p.

Los Angeles—Coye, 2b; Butler rf; Bergman, cf; Quinn, 1b; Ailswroth, 3b; J. Swartz, lf; Katen, p; F. Swartz, ss; Sibert, c.

In an eleven inning game featured by fast fielding and heavy hitting the Coast Division team recently defeated the Monterey team on their home grounds by a 5 to 2 score. F. W. Veacox, manager of the team, is anxious to arrange games with other S. P. clubs.

NEW DAYLIGHT TRAIN

A Sunday train has been added to the schedule of the Daylight Limited between Los Angeles and San Francisco over the Coast Route beginning June 10. This arrangement will give passengers the benefit of this popular daylight service on Fridays, Saturdays and Sundays, and will make eleven passenger trains operating each way between San Francisco and Los Angeles on those days. The trains leave both cities at 7:45 a.m. arriving at each terminal at 8:30 p.m.

WM. HOOD IS HONORED BY DARTMOUTH COLLEGE

Wm. Hood

William Hood, former Chief Engineer of the Southern Pacific Company, who retired from active duty two years ago after 54 years of brilliant service, was given the honorary degree of Doctor of Science June 19 by Dartmouth College, Hanover, N. H., at its 154th commencement.

Mr. Hood left Dartmouth in 1867 to come West and this was his first return to his alma mater.

In summing up Mr. Hood's career, Ernest Martin Hopkins, President of Dartmouth, conferred the degree with these words:

"William Hood, great among the greatest of your profession, brilliant in conception and accurate in execution of daring projects; whose attributes which men call genius are but the disciplined marshaling of great talents; in which the embodiment of the early pioneer spirit of New England has carried on; who, in spanning the plains, bridging great waters and conquering the approaches to mountain heights, leveled the barriers of a continent, opened gateways to new opportunities and gave access to the vastly enlarged resources needful for the growing population of this great nation."

When Mr. Hood went to work for the Central Pacific in 1867 the line had only 90 miles of track. Today the Southern Pacific System, of which the Central Pacific was the parent, operates more than 11,000 miles. In the construction of this trackage which runs 7000 feet above sea level and 200 feet below and which in spite of the obstacles placed by nature in the way of its construction holds a world record for safety and travel-comfort, Mr. Hood played the directing part.

He shared in the first historic struggle to scale the Sierras. The Tehachapi Loop, the conquest of the Siskiyous, the Lucin Cut-off all stand as monuments to his engineering skill. His last big work was the construction of the line through the Carriso Gorge in southern California which pierces solid granite 17 times in 11 miles.

Mr. Hood at 77 is still a young man. He has a complexion that a flapper would envy and a stride that Weston, the noted globe trotter, would have to extend himself to equal. It was by keeping himself physically fit that he was able to fill his record with so much accomplishment. "No business on Sunday and a long hike" is his recipe for perpetual youth.

"Does your wife drive a car?" we asked a friend.

"Oh yes," he said, "but only when I'm at the wheel."—Exchange.

All Car Loading Records Cut

Southern Pacific's Efficiency Record Brightens Outlook for the Western Shippers

ALL records for heavy car loading on Southern Pacific Lines were broken in May, when an average car load of 28.6 tons per car was obtained. This efficient use of cars was due, J. H. Dyer, General Manager of the company said in commenting on the record, to the wholehearted cooperation of shippers and the company employes.

The railroads of the country are uniting in efforts to speed up transportation in order to handle the enormous freight business, expected this year, with the facilities at their command. The American Railway Association recently outlined a program of railroad accomplishment which should be attained by the roads in order to effectively handle the record breaking business. This program calls for a maximum of 15 per cent of locomotives requiring heavy repairs and 5 per cent of freight cars in bad order, and a minimum average of 30 miles per freight car per day, and 30 tons of freight per car loaded.

"Shippers on our lines should take considerable comfort from the way Southern Pacific is putting its shoulder to the wheel in the effort to speed up transportation," says Mr. Dyer. "Further improvement in condition of equipment in May released for service 48 additional locomotives and 199 freight cars. This gives us only 11.4 per cent of locomotives requiring heavy repairs and 3.5 per cent of freight cars in bad order, as compared with the 15 and 5 per cent set as the mark for the railroads as a whole.

"The latest report on average miles per freight car per day shows that in March we secured an average of 40 miles per day, and in April an average of 42.4 miles per day, as compared with the American Railway Association program of 30 miles per day. This provided the equivalent of 73,700 additional car days in April, or an average of 2,457 cars per day.

"The average car load in March was 27.6 tons, in April 28.1 tons and May 28.6 tons. The beneficial results of this heavy car loading to shippers is shown by the fact that the heavier loading in April, as compared with March, was equivalent to adding 1,435 freight cars to the car supply available to our patrons.

"While distance between our terminals enables us to obtain a relatively high average car mileage per day, we are handicapped, on the other hand, in our efforts to secure the average tons per car sought for the nation by reason of the large volume of light weight perishable freight we handle, and the small amount of heavy commodities such as coal, iron, etc.

"I believe the foregoing figures are convincing evidence of this company's determination to efficiently handle any transportation emergency that may arise."

Tabulated figures on Southern Pacific's transportation accomplishment are as follows:

	A. R. A. Program	Pacific System Program	Pacific System Record May 1st	June 1st
Number of locomotives requiring heavy repairs..			219	171
Percent of locomotives requiring heavy repairs..	15.0	15.0	14.6	11.4
Number of freight cars in bad order..............			1,859	1,660
Percent freight cars on line in bad order.........	5.0	5.0	4.3	3.5
			March	April
Average miles per freight car per day............	30	40	40.0	42.4
Average tons of freight per car loaded...........	30	30	27.6	28.1

SALAD RECIPES ISSUED BY DINING CAR INSPECTOR

An illustrated booklet containing much valuable information on the preparation and serving of salads, entitled "My Tiny Companion," has just been published by Chas. L. Barkoff, inspector of dining cars, hotels and restaurants for the Southern Pacific.

The booklet is profusely illustrated in color and contains scores of recipes for appetizing and attractive salads, condiments, and salad dressings, such as have contributed to the fine reputation of the Company's Dining Car Department.

Barkoff has had a wide experience in the catering profession and his broad knowledge of the culinary art has enabled him to compile this little handbook which should prove of inestimable value to chefs, stewards, and housewives.

RESORTS OF OREGON WIDELY ADVERTISED BY S. P.

Oregon's beach, mountain and lake resorts are being extensively advertised by the Southern Pacific Company.

A new forty-page pamphlet, beautifully illustrated and containing detailed information on the numerous resorts of Oregon, has just been issued by the Company. Thousands of copies of the handsome folder have been printed and are being distributed throughout the country.

Crater Lake, Newport and Tillamook beaches, Oregon Caves National Monument, Coos Bay country, Klamath district, Mt. Jefferson, Diamond Peak, Umqua country, Portland, Williamette Valley, Oswego Lake and Oregon's mineral springs are included in the many districts described in the booklet.

Fuel--A Reducible 13 Per Cent of Expense

Existing Problems and Probable Future Devlopments in Relation to Fuel Economy Discussed by Chairman at Fuel Association Convention

By J. KRUTTSCHNITT

Chairman, Executive Committee, Southern Pacific Company

THE United States Geological Survey warns us that we have been depleting those of our coal deposits most easily mined at a steadily increasing rate: that we have mined more coal in the last twelve years than in the preceding 150.

With the upward trend of labor and material costs and difficulties of mining, the cost of coal must rise steadily in the future, and these considerations should stimulate its provident use. In 1921 the railroads used approximately 137,000,000 tons, or 27.3 per cent of the total production of bituminous and anthracite coal in the United States, and its cost of $594,479,000 constituted 13 per cent of total operating expenses. Let us try to visualize the coal represented by these figures, which are bewilderingly large: it would require 68,500 freight trains—40 cars to the train, 50 tons per car—to transport it; they would have to follow each other at intervals of about seven and a half minutes during the entire year to pass a given point. Assembled in one pile it would make a pyramid with base one mile square and 590 feet high.

We have come here to study how to make our railroads more efficient public servants, and to devise how to save as much as possible of the 13 per cent of operating expenses represented by fuel cost. Every one of us should admit frankly his full share of responsibility for our shortcomings. Too often efforts to save fuel go no farther than to criticize the work of the men directly charged with its consumption, and thereafter to rest under the smug impression that we have done our full duty.

While all recognize the great influence of the work of the locomotive fireman who furnishes the steam to run our trains, and of the engineer who applies it to vitalize inert steel and iron, on net earnings, we shall show how substantially every man in railroad service from the chief executive to the humblest private who guards our permanent way, shares in the credit or discredit of operating results.

Fundamentally, a railroad is a manufacturing plant designed to convert the energy locked up in fuel into work for transportation uses on specially designed roadways. The energy conversion is by means of locomotives, and the success of the plant depends on the spread between production costs and selling prices of output, measured in this case in passenger-miles and ton-miles.

> *'EVERY man in railroad service from the chief executive to the humblest private who guards our permanent way, shares in the credit or discredit of operating results," said Mr. Kruttschnitt in his address at the annual convention of the International Railway Fuel Association at Cleveland, May 21.*
>
> *The Chairman's address, in which he discusses present problems and probable future developments of railroad operation in relation to fuel economy, is printed in full in this issue.*

Fuel is the largest item of material expense on a railroad, and however efficient our firemen and engineers may be, their efforts would fall far short of the desired end without the perfect co-ordination of every department in the plant, all of which influence cost of output.

The activities of a railroad are centered in the following departments; each must function efficiently alone and also in connection with all others, in order to attain the greatest measure of success:

I. Executive Department

"The location of a railroad is giving it its constitution. It may be sick almost unto death with accidents of construction and management, but with a good constitution it will ultimately recover." The Executive Department must determine the location of the railroad between the termini that the railroad is to connect; it prescribes the amount of money to be spent on construction; fixes the grade and curve systems, because the ideal railroad, between given points, would be absolutely straight and of uniform grade, that is, devoid of undulations in alignment or profile. The locomotive's consumption of fuel will increase in proportion to the grade and curve resistance involved in departures from the ideal line. Whenever a ton weight is lifted one foot, an amount of work equivalent to moving it 333 feet over a straight, level track is spent; and every time a ton weight of train is forced through 100 feet of one degree curve, the work done in deflecting it from a straight to a curved path is equivalent to moving the same ton over 16 2-3 feet of straight, level track. The old line of the Central Pacific between Ogden and Lucin, Utah, in a distance of 146.7 miles, had 4,260 degrees of curvature and rose 390.2 feet westbound. The new line, the Lucin Cut-off, in 102.9 miles has 341 degrees of curvature and rises 390.2 feet westbound. The equated straight, level track is 280.2 miles for the old and 128.6 miles for the new line. It takes one pound of coal on the new to move as much as 2.2 pounds of coal moved on the old line.

The Executive Department must determine the justifiable outlay to reduce grades and curvature on existing lines, as obviously the expenditure necessary to obtain a straight line between two points without any undulations in grade might be commercially prohibitive. It is, therefore, of the greatest importance for the commercial success of a railroad to balance the money cost of approaching as nearly as possible ideal conditions against the expected advantages.

Fuel economy can often be effected by expensive physical improvements, such as installing automatic block signals, redesign of terminals, modernizing roundhouses so as to utilize the residual heat from incoming locomotives to raise steam on outgoing ones, and by increasing the number and lengths of sidings to save delays on the line. On the executive rests the responsibility of balancing the interest, maintenance and depreciation costs on large capital expenditures against possible savings, and of providing the necessary capital if the investment is justified.

II. Accounting Department

The Accounting Department keeps track of earnings and expenses, records the history of operations, and acts as general inspectors to expose poor results as a prerequisite to correcting them. No expense should be spared in publishing promptly all data that show results of operation. The record traffic handled with record efficiency in 1917 was the response of the railroads to the monthly data sheets first issued by the Railroads' War Board, which now are issued in even more detail by the Interstate Commerce Commission and the Bureau of Railway Economies. Fuel accounts kept with individual engineers and firemen and locomotives furnish railroads with data from which to decide definitely what type of locomotive is the most economical for their use, and whether the expense of applying and maintaining some of the many fuel-saving devices is warranted. While the experience of the men who make the decisions will usually keep them from going far wrong, yet in matters involving millions in both capital and operating expenses a railroad officer should not be satisfied unless he has definite figures on which to base decisions.

III. Traffic Department

The Traffic Department sells the output of the railroad plant, and its contracts as to loads in cars and character of service exert a profound influence on fuel consumption.

On a level grade at a speed of 20 miles per hour it requires 460 pounds of tractive effort to haul 50 tons in two cars of 21 tons' weight; it requires only 270 pounds to haul 50 tons in one car of the same weight, or 41 per cent less. To haul the same car and contents at 40 miles per hour increases traction from 270 to 412 pounds, or 53 per cent; hence the importance of heavy carloads and moderate speed.

IV. Maintenance of Way Department

As the resistance to traction of locomotives and cars varies between wide limits with the condition of the track, the Maintenance of Way Department can greatly reduce expenditure of energy and fuel in moving trains. The train resistance figure commonly used of six pounds per ton of 2,000 pounds at low speed assumes track in good condition. It may very easily be two or three times that amount on poorly maintained track, laid with light rail in bad surface and with low joints, etc. The heavier the rail and the better the ballast, the easier it is to maintain good alignment and surface, the less will be the deflection under loads, and the less will be the work required to force the wheels out of the depression caused by weak and yielding joints.

V. Maintenance of Equipment Department

About one-fifth of all locomotive coal, or 25,000,000 tons, in 1921 was consumed when the locomotive was not doing useful work: in firing up, in waiting for trains, in standing on sidings and passing tracks, in delays at terminals, drawing fire and waiting at ashpits.

While this consumption is not directly productive, it is, of course, not all to be regarded as waste. Locomotives must be fired up and their fires must be cleaned, but substantial economy results from using steam blown off incoming to heat up outgoing locomotives. A certain amount of time must also inevitably be spent in yards, terminals and sidings. All these are essential activities incident to operation, but since so large an amount of coal is involved it is clearly important that these periods should be reduced to a minimum.

This is part of the fuel conservation problem that no one department solely controls; the chief responsibility lies with roundhouse forces, transportation officers and dispatchers, who, by the exercise of forethought and close attention to details of grooming and assigning locomotives, can achieve substantial results.

Of every 100 pounds of coal burned while locomotives are running—

1. 70 pounds are applied in making steam;
2. 14 pounds go out of the stack as waste heat in gases;
3. 8 pounds go out of the stack as cinders;
4. 4 pounds go out of the stack as unburned gases;
5. 4 pounds go into the ashpan and ashpit.

These figures are based on good performance, which, of course, is much better than the average of all the locomotives in the country.

The losses under heads (2), (3), (4) and (5) total 30 per cent and indicate directions in which efforts to save fuel should be made. While it is impossible to eliminate any of these losses entirely, each many be reduced by methods of proven merit. The remaining 70 per cent of the heat in the coal is stored in the steam. Of this store—

52 parts are lost in the steam exhausted from the stack, on its way to perform some useful work in creating draft;
5 parts are lost in radiation;
7 parts are lost in operating air-pumps, injectors, blower and other auxiliaries;
6 parts are used in useful work applied at the locomotive drawbar.

70%—Total.

The percentage of useful work can be increased from 6 per cent to 8.1 per cent, or 35 per cent, by the use of methods and devices that we shall enumerate.

Shown in this picture taken at the convention of International Railway Fuel Assn. at Cleveland, are, left to right: G. H. Lehman, fireman, Salt Lake Division; E. E. Reynolds, engineer, Coast; F. W. Halsey, eng., Shasta; R. C. Hayden, fireman, Salt Lake; O. G. Purdy, eng., Salt Lake; E. G. Cook, agent, Cleveland; W. S. Meyer, fireman, San Joaquin; A. Lagomarsino, fireman, Stockton; L. P. Todd, fireman, Shasta; M. P. Canavari, fireman, Western; H. Kroeger, eng., Tucson; J. Kruttschnitt, Chairman Executive Committee Southern Pacific; J. R. Falvey, eng., Western; J. N. Clark, chief fuel supervisor; J. A. Singleton, fireman, Sacramento; C. W. Sturdevant, ass't. engineer of tests; J. J. Murphy, water service foreman, Western; F. S. Hickman, eng., Sacramento; H. M. Wheeler, fireman, Portland; W. E. Stoermer, eng., Los Angeles; R. S. Twogood, ass't. engineer; S. H. Bray, fuel supervisor; H. F. Edwards, fireman, Los Angeles; D. C. Bailey, eng., Stockton; P. E. Stickler, fireman, Tucson; M. Alexander, fireman, Coast; F. L. Gilbreath, eng., San Joaquin; J. Furlong, eng., Salt Lake.

In designing locomotives, the features exercising the greatest influence on fuel efficiency are:

Careful and expert proportioning of engines, boilers, fireboxes, grates, flues, draft appliances, so as to produce by their combination the most perfect device to extract their full heat contents from fuels.

With the increase in the power of locomotives and the use of higher steam pressures, mathematical talent to replace rule of thumb has been called on to compute stresses and to proportion parts. Questions as to adoption of alleged improvements are difficult to decide, as they involve first cost, interest, maintenance and depreciation, their possible effect on engine failures and the idle time of the locomotives while they are undergoing repairs. Sometimes economy of operation is sacrificed to facilitate adjustment and repairs, as when outside valve gears replaced the old Stephenson link motion.

The practice of buying locomotives regardless of their adaptability to special service, as was done during Federal control, simply because they can be built in quantity at some reduction in cost, is recognized by competent judges as the poorest kind of economy.

While it is customary to speak of the waste of fuel in the average locomotive, which converts but 6 per cent of the heat in fuel into useful work, we must not forget the extremely unfavorable conditions under which it is required to work. On account of space limitations it cannot use condensing engines, and thus is deprived of the advantage of 12 to 13 pounds additional effective cylinder pressure. It is driven through all kinds of weather at high speed, so that radiation losses are very great. To meet the demands made on its boiler for steam, explosive draft must be used, which expels much unburned fuel from the firebox; the resultant effect of all of which is evidenced in low thermal efficiency. The Brake thermal efficiency—or percentage of energy in fuel transformed into work—or reciprocating, condensing, stationary steam engines is (boilers excluded) ..19.0%
Of steam turbines 19.2%
Average of eight large power-plants (boilers included) 13.3%
While the thermal efficiency of non-condensing steam locomotives at maximum capacity, equipped with proven fuel-economizing devices, is from....... ....7.3% to 8.1%

The fuel-saving devices in most general use are:

Brick Arches

Brick arches built into the firebox mix the entering air thoroughly with the combustible gases rising from the fire, thereby insuring more perfect combustion and preventing the unconsumed fuel in the shape of flames from taking a short-cut into the flues, where they would, by cooling, waste much of the heat value of the fuel. Competent authorities assign them a fuel-saving value on some types of locomotives of about 12 per cent.

Superheating

The advantages resulting from the use of superheated steam are due mainly to two properties:

(a) Prevention of Cylinder Condensation. Saturated, non-superheated steam entering the cylinder comes into contact with, and gives up heat to, the metal of the cylinder, steam passages and piston, which have been cooled during the preceding period of expansion and exhaust. Twenty-five per cent (25%) or more of the entering steam may be condensed in this manner before cut off, and thus lose its capacity for useful work

Since superheated steam has a temperature higher than that corresponding to the point of condensation, it can give up heat to the cooled cylinder walls without condensing any of the steam, thus entirely avoiding cylinder condensation.

(b) Larger Volume Per Pound.

	Gage Pressure lbs. per sq. inch	Temperature	Total Heat B. t. u.	Volume Cu. ft. per lb
Saturated steam	200	387.9°F.	1199.2	2.141
200°F. superheated steam	200	587.9°F.	1309.7	2.84
Percent increase			9.2%	32.7%

Since the cylinder takes the same volume of steam per stroke for the same cut-off, it is obvious that substantially less pounds of steam will be used for the same work done.

Superheating may save 20 per cent of fuel.

Feed-Water Heaters

After raising a pound of water to its boiling point, 212° Fahr., 970 thermal units (the British thermal unit B. t. u. being the amount of heat necessary to raise the temperature of one pound of water from 63° to 64° Fahr.) are required merely to change its state from a liquid at 212° to a gas at 212°; conversely, when a pound of steam is exhausted from the cylinders of a locomotive it gives up over 970 ther-

Fuel Savers Have Chance To Win $100 Prize

SOUTHERN PACIFIC trainmen are given an opportunity to compete for a $100 prize for the best paper on railway fuel conservation. The contest closes on July 31. Editors of the Railway Review and the Railway Age will judge the relative merits of the papers. Locomotive engineers, firemen, train conductors, brakemen and switchmen are eligible to enter the contest. All papers written by Southern Pacific men are to be forwarded to J. N. Clark, Chief Fuel Supervisor, who will forward them to the judges.

"The Southern Pacific leads all railroads in fuel economy," says Mr. Clark, "and this seems an excellent opportunity for some one of our trainmen to win honors in a nation-wide contest."

mal units in condensing from a gas into a liquid. A part of the heat-energy in the exhaust steam is utilized to create the draft in the firebox through the grates, but most of it ordinarily is wasted. Feed-water heaters utilize part of this waste heat to raise the temperature of the feed water, thereby relieving the fuel in the firebox from heating the cold feed water from an average of 60° Fahr. up to 220° Fahr. and saving about 10 to 14 per cent of fuel.

The combined average effect of these three devices in saving fuel on passenger and freight locomotives of various types at various speeds in actual service is given below, but we must not forget that these figures vary widely for different locomotives, speeds and classes of service, thus:

	Average, various types and speeds
Arch	9%
Superheater	20%
Feed-water heater	10%
Combined	34.5%

These three devices are of proven value and are coming into extensive use; however, there are others on the market whose claims have not yet been thoroughly substantiated, which may develop into valuable adjuncts to the locomotive.

The savings claimed for the various fuel-saving devices are gross figures. The cost of applying them is quite large, and in some cases not justified by the age or obsolescence of the locomotive; in others, is beyond the financial ability of railroads to apply them; hence we must be careful to balance cost of interest, maintenance and depreciation against the value of the fuel saved. The net saving so determined—not the gross—will show whether the money to provide the appliance can be providently expended or not. Experience shows that thus tested the gross saving of superheaters is reduced from 20 per cent to about 17.4 per cent; of feed-water heaters from 10 per cent to about 6 per cent.

Boosters

Under normal conditions a locomotive can haul as much, or even more, load than it can start. The booster consists of a pair of independent engines coupled to the trailer wheels of locomotives, thus utilizing weight not otherwise used for traction, in starting and quickly accelerating trains and in reducing violent shocks in starting, which are so hard on draft gear and the temper of passengers. As it cuts out automatically at a speed of 10 miles per hour, it uses steam at low speeds when the boiler can over-supply the main cylinders. It is therefore an indirect but valuable fuel saver through increased locomotive capacity. It can add about 10 per cent to the drawbar pull of heavy freight and as much as 25 to 35 per cent to the drawbar pull of lighter passenger locomotives.

However excellent may be the design of the locomotive, close and unremitting attention to the numberless details of operation is necessary to obtain the maximum work with minimum consumption of fuel. We can touch on the principal ones only in the limited time at our disposal:

Mr. Kruttschnitt Honored By Fuel Association

"THE outstanding feature of the fifteenth annual convention of the International Railway Fuel Association just concluded at Cleveland, Ohio was the address of Mr. Kruttschnitt" says J. N. Clark, Chief Fuel Supervisor, who was the presiding officer.

"So enthusiastic was the Association over Mr. Kruttschnitt's discussion that he was not only tendered a rising vote of appreciation but was also made an Honorary Member of the International Railway Fuel Association, a compliment never before bestowed upon a railroad man."

Feed-Water Purifiers

1. After selecting the softest natural feed waters, such others as we may have to use should be chemically treated to reduce objectionable impurities to a minimum. A conservative estimate of the effect of scale one-sixteenth inch thick on flues is to increase fuel consumption 10 per cent. The Hungarian State Railroads use on 3,000 locomotives a mechanical feed-water purifier mounted on top of the boiler. The water on entering the purifier is subjected to full boiler pressure and temperature, and deposits its scale in and on this adjunct to the boiler instead of in the boiler and on the flues. With reduction of scale there is a direct saving in fuel consumption, while a reduction in frequency of boiler washings saves considerable time and fuel. Without the purifier, locomotives were washed on an average every five days; with the purifier, every 54 days or 5,000 miles.

Lubrication

2. All journal bearings must be carefully lubricated to reduce friction; so must the center—and side-bearings of cars, the friction of which prevents the adjustment of trucks on entering and leaving curves, and thereby in the aggregate causes a heavy increase of the resistance to traction that the locomotive must overcome.

3. Wear on all wheels of locomotives, tenders and cars must be watched. If the treads are worn hollow or flanges worn vertical, the areas in contact with the rails when cars are oscillating or rounding curves will be increased and friction correspondingly increased. A heavy freight locomotive, tender, caboose and 60 freight cars are carried on over 500 wheels; a slight increase in the friction on a few of them only would, in the aggregate, create a heavy drag on the locomotive.

Flange Lubrication

4. Flange lubrication reduces friction between rail and flanges, and therefore has a substantial effect in reducing fuel consumption. On two roads where flange lubrication was used, locomotive tires showed average miles between turnings of 33,000 and 44,000 miles, respectively, compared with 16,000 and 23,000 without. Wear on rails in curves show reduced wear of as high as 87 per cent. On one road of excessive curvature and grade the life of locomotive tires was increased 375 per cent with flange lubrication.

Fuel Specifications

5. To insure full heat value the specifications for fuels purchased should cover their value in B. t. u's.

Maximum Loads in Vehicles

6. Freight cars should be fully loaded as far as may be. The resistance of a train of empty freight cars may run up to eight pounds per ton; that of cars with average loads to six pounds per ton, while that of heavily loaded cars, of total weight, 60 to 70 tons, may be as low as four pounds per ton. The load, in other words, should be carried in as few cars as possible.

Reduction of Dead Weight

As the expenditure of fuel in hauling a ton is the same whether or not it is paying freight, it is evident that the smaller the percentage of non-paying or dead weight to total weight moved, the smaller will be the fuel consumption in hauling the paying freight.

The United States Railroad Administration 50-ton, single-sheathed box car weighs 47,200;

American Railway Association 50-ton box car design 42,400;

Excess weight of U. S. R. A. car—4,800 pounds, or 11.3 per cent.

Based on 1921 data, the saving in fuel by eliminating this excess weight, is $9.12 per car per year.

As far as practicable all weight in a locomotive above what is needed for adhesion to develop traction should be eliminated.

Boiler design to suit class of service, and character of fuel, requires considerable flexibility in this principle.

7. The men who run the locomotives should understand the principle of combustion and the economical use of steam. If too little air is admitted to the firebox, much of the fuel in the shape of dense, black smoke will leave the smokestack unburned and wasted; if too much is admitted, all in excess of what is necessary for perfect combustion will be uselessly heated and pass out of the stack carrying valuable heat with it—again a waste. The fireman, master of his business, will take his locomotive over a division, never allowing black smoke to leave the stack. So the experienced engineer will run uniformly, using just enough steam to maintain desired speed and will waste none in bursts of speed, which must be reduced by brake application, which means waste of power and consequently fuel. The work units expended in stopping a heavy freight train of 66 cars weighing, with locomotive and tender, 6,203,700 pounds, from a speed of 40 miles per hour, is 332,000,000 foot-pounds, or 427,000 B. t. u's. In storing this energy in this train a locomotive of the best type operating at 8 per cent efficiency would burn 380 pounds of coal.

8. Close supervision to insure (a) schedules that can be made with reasonable certainty, (b) make-up of trains to minimize way and terminal switching, and (c) careful tonnage ratings of locomotives to avoid over or under-loading, effects substantial fuel economies.

Co-Operation in Saving Fuel

Assuming that locomotives are properly maintained, in order to obtain the best results from burning fuel we must inspire the interest and secure the co-operation of the men on the footboards of our 65,000 traveling power-plants. How these ends are attained will appear from a brief of the practice on a large railroad system covering many states and operated under the most varied topographical and climatic conditions.

1. Thorough monthly inspections are made of all parts of the engines, boiler and appliances, draft arrangements, etc.; in addition, inspectors provided at each terminal inspect engines on arrival and again before departure to see that no defects remain uncorrected before the engine begins its trip.

2. Statistics systematically collected and classified supply a complete history of operation. To be of most use they are issued immediately after the occurences they record.

(a) A fuel bureau receives daily report of train and locomotive movements within two days after movement. Ton-miles, fuel consumed per 1,000 ton-miles, tons per train for each individual locomotive and each individual engineer and fireman are then computed, and the results put into superintendent's hands three to six days after movement, so shortcomings can quickly be detected and corrected.

(b) Monthly statements of individual performance of engineers, firemen, and locomotives are prominently displayed on bulletin boards.

(c) A sheet recapitulating results by divisions is also issued monthly.

3. On each division a fuel committee composed of 4 engineers, 4 firemen, 1 conductor, 1 brakeman, serves for six months and holds meeting bi-monthly, the superintendent acting as chairman. The meetings are well advertised and are attended by the superintendent's staff and employes from all related departments, who offer suggestions freely. Experts on operating methods and appliances deliver addresses. Motion pictures illustrating actual road conditions are exhibited. Minutes of meetings are widely distributed and published in employes' magazine.

4. To create emulation between divisions, a red silk banner is awarded quarterly to divisions showing greatest improvement in the previous year.

5. Gold-plated cap badges are awarded quarterly on each division to the engineer and fireman showing best fuel record in through and local freight and passenger service.

6. Each superintendent publishes the names of five engineers and five firemen having the best fuel records for the month in through and local freight, passenger and yard service on a roll of honor, which is posted in roundhouse and printed in employes' magazine. A letter of commendation is sent to each man whose name appears on the roll.

7. The company sends yearly, at its expense, 38 men consisting of an engineer and a fireman from each division with the best fuel records, as its representatives to the annual convention of the International Railway Fuel Association.

As a result of the policy described and of many fuel-saving devices, the company referred to moved 26 per cent more gross ton-miles per pound of fuel in 1922 than in 1913.

VI. Transportation Department

We have shown that about 20 per cent of all locomotive fuel is consumed when the locomotive is not doing useful work. The fuel losses involved in firing up outgoing and in blowing off, watering, sanding, wiping and issuing supplies to incoming locomotives occur while the locomotive is in the hands of the Mechanical Department, but these losses are directly affected by the dispatch and movement of locomotives that are entirely in the hands of the Transportation Department. Other sources of fuel loss in this department are waiting for trains, standing in sidings and passing tracks, delays at terminals.

(a) Avoidable losses from fuel used in firing up, because some fuel must be used for this purpose; losses from unconsumed fuel drawn from fireboxes, from blowing off and cooling down at end of runs; losses incurred while waiting for water, sand and other supplies on roundhouse tracks can be very greatly lessened by reducing the frequency of these occasions as much as possible, and this can be done by lengthening the runs of both passenger and freight locomotives. It is not uncommon now to run freight locomotives over two or three freight divisions, and passenger locomotives over four freight divisions before cooling them. The following are some examples of modern practice:

PASSENGER

Road and Run	Mileage
M. K. & T. Ry.—Parsons, Kan., to San Antonio, Texas	651
Union Pacific—Council Bluffs, Iowa, to Denver, Colo.	562.6
Southern Pacific—Ogden, Utah, to Sparks, Nev.	536
Southern Pacific—San Francisco, Calif., to Los Angeles, Calif.	475

FREIGHT

Road and Run	Mileage
Southern Pacific—El Paso, Texas, to Del Rio, Texas	451
Southern Pacific—Houston, Texas, to Algiers, La.	362
Southern Pacific—San Antonio, Texas, to Fort Worth, Texas	352
Santa Fe—Los Angeles, Calif., to Needles, Calif.	310

(b) We have shown how great loss of energy occurs when a heavy train is stopped. Close attention on the part of dispatchers will reduce the number of needless stops and careful planning will avoid fuel waste from locomotives standing in sidings because of poor meeting points, and from idle time at terminals waiting for trains.

(c) The economy of moving tonnage in as few cars and trains as possible and reduction of empty mileage is obvious.

Future Development

We come now to a study of the

(Continued on Page 33.)

SAMUEL H. DAVIS, VETERAN S. P. CONDUCTOR, DIES

Samuel H. Davis, one of the best known among the Southern Pacific pensioners, died at his home in Alameda on June 3 after a brief illness.

Samuel H. Davis

Mr. Davis was the first conductor on the old South Pacific Coast Railroad between Alameda Pier and Santa Cruz, and was a nephew of Alfred E. Davis, president of that company, which was later taken over by the Southern Pacific. He entered the service of the South Pacific in May 1876 and for almost 44 years he continued in service as a conductor on this line.

Since his retirement from active service on September 1, 1919, he has lived at his home in Alameda. He was 75 years old and is survived by his wife and two sons, Samuel H. Davis, Jr., and Edward J. Davis. The latter son lives at Panama City, Fla., and using a racing automobile, seaplane and motor boat, he set out on a race with death to be at the bedside of his father. On arriving in New Orleans young Davis was handed a telegram stating that the father was dead.

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THERE is no substitute for results.

The trouble with excuses is that after the first one, or perhaps two, they don't excuse. After the first one or two, "alibis" don't mean anything.

After the first one or two, the better the excuse the less effective it is. People quickly become suspicious of the glib-tongued person who repeatedly gives them a perfect excuse instead of a result.

When one gets to be an expert "alibi" maker he loses his capacity for doing anything else.

Results are demanded in our work—in every phase of life. There is no substitute for them. The first plausible excuse may win us another chance but excuses soon begin to react against those who make them.

There is no substitute for results.

RAILROAD men and women are justified in the pride and satisfaction they take in their work. In these columns attention has frequently been called to the interesting and worthwhile character of railroad service.

Somewhat the same thought was recently expressed by B. C. Forbes, financial writer, in the following from the San Francisco Examiner:

"The railway worker who has the right slant on his job feels—knows—that he is helping to make the running of that railroad possible, that he is playing a worthy part in making it possible for America to enjoy its present state of civilization; that his work, and the work of his fellows, is needed to carry food raised by the farmers and minerals produced by the miners to the dwellers in our towns and cities, to feed them and shelter them; that, without his services and the services of his brother toilers, stagnation and starvation would overtake millions of his fellow beings."

Smile As We Serve

SERVICE is not merely the physical act of carrying out the obligations which are part of a railroad's operation. It is evidenced strongly in the attitude of a railroad's employes towards the public, and the first and best service is in the promptness and courtesy in which the individual member of the public is received and served by the employes with whom he first comes in contact. It should be the pride of Southern Pacific men and women to establish what some one has called: "Service with a Smile," and this, no matter how small be the matter under consideration, should be the ruling spirit. That it is a well established principle, we feel sure, but let us all go it one better so that the fulfillment of the actual obligation of carriage shall have been preceded by the intangible something that means so much and costs so little.—S. P. Bulletin (Atlantic System).

ON the impulse of a moment a man often decides what he will do with money that has taken him years of hard work to acquire. The result of such hasty decision is nearly always disastrous. Care and deliberation are necessary in making any investment.

Let us remember that safety and immediate, extraordinary return on the investment never go together. We may well beware of the slick promoter who tries to lull us into insensibility with promises of fabulous yield on investment. "Get rich quick" is the anesthetic that is applied to make the removal of the bank roll a painless operation.

"Many railroad men have invested their savings in companies to promote the development and sale of potential specialties for use on the railroads," said Railway Age recently. "In too many cases they have been carried away by the enthusiasm of the inventor or promoter and have failed to secure advice from experts as to the practicability of the device in question." That is another thing, particularly for us in railroad service, to bear in mind.

Before we let go of the hard-earned cash for any investment, we should consult some cool-headed, disinterested expert. A banker is a good man from whom to get advice regarding almost any kind of investment. It is his job to pass upon investments.

Some months ago Southern Pacific Company established a plan whereby employes may purchase shares of its capital stock on easy installments. This plan was put forward as a plain business proposition and no employe was or is urged to take advantage of it. However, the plan provides a convenient way for us to save money and obtain a partnership interest in the business.

Another good investment for anyone is the purchase of a home.

Pertinent Paragraphs

"Out of the spirit of service grows traditions and out of these traditions grow accomplishments." — Wm. Sproule.

"No business institution in America can rise to permanent greatness unless it justifies being served by a liberal policy of serving the Public."—Portland Journal.

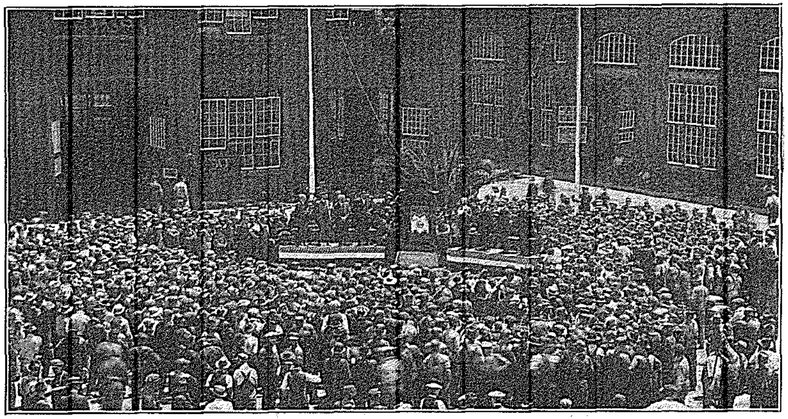
"The American people do not realize the great contribution of our railways in preventing some of the great ills and perils that have well nigh undone other nations."—John R. Mott.

"It is folly to think the railroads may be abused and buffeted about and deliver that efficient public service which must be had for the rapidly growing and spreading industrial enterprises of the country."—E. Mentzer, economist, McDonnell & Co.

"Government operation of the railroads ended in a fine muddle. Nobody wants a return to the old days of absolutely unregulated railroads—but the time is coming for a drastic change in the scope and object of the present regulation. Prosperity throughout the country is bringing that time closer. It will soon be necessary to cut some of the red tape that now entangles the railroads."—San Diego "Union."

"Federal legislation should be regulatory and not administrative. It is, for instance, a necessary thing that the Government should prescribe reasonable rates; that it should protect the shippers in equal opportunity for service; that it should regulate the issue of securities and perhaps exercise a reasonable control of plans for railroad construction and railroad consolidation, but, on the other hand, it should refrain entirely from any attempt to administer or supervise railroad operation, for to the extent of its interference in this respect it will necessarily destroy the initiative of the individual upon which alone is built the entire scheme of industrial progress."—Robert J. Cary, General Counsel, New York Central Railroad.

SAFETY BANNER INSTALLED AT L. A. SHOPS



Noon hour at Los Angeles General Shops when 1922 Safety Banner was formally installed.

FORMAL acceptance and installation of the 1922 Safety Banner won by the Los Angeles General Shops was the occasion recently for a special celebration during the noon hour at the southern shops. Lively music was played by the shop band and several hundred employes gathered around the improvised speakers stand where the banner was displayed in a specially built cabinet.

P. Sheedy, Superindendent of Motive Power, Southern District, expressed his appreciation for the efforts of the shop employes in promoting safety and urged them to continue their active work in accident prevention. Mr. Sheedy said in part:

"This banner comes to us as a prize, awarded to the general shop making the most successful effort in promoting safety ideas during the past year. The result of your efforts is measured by the number of accidents per million-man-hours worked, and it goes without saying that we could not have this beautiful display today were it not for your efforts. The contest was very close between the Sacramento and the Los Angeles General Shops, but you Los Angeles men were the winners.

"The fact that you won this banner does not mean that you can afford to become careless and resort to indifferent practises in doing work to which you are assigned. The contest under way for the current year is still close, but so far as we have gone for the year the figures are in our favor.

"I have confidence in your ability to win the 1923 banner and I am so hopeful that space has been provided for on the moulding of the cabinet, to show you as winners of the 1923 banner. There is also room to record the winning of banners for several years to come.

"I hope you will keep in mind the obligation you owe yourselves and your fellow workers of doing all you can to promote safe practices in doing your work. If you do so, the 1923 banner will come to Los Angeles. I suggest that the older and more experienced among you should not overlook the less experienced worker. As you pursue your various duties, if you see any of your fellow-workers handling their work in a way that in your good judgment you know to be unsafe, give them a friendly hint. It will take practically no time to do this and after a few such hints, the careless, inexperienced man will probably get the safety habit."

"SACRAMENTO" ADDS CAR

In order to take care of the increased travel between Los Angeles and Portland, an additional standard Pullman car, is being operated to Sacramento on train 59-63, known as the "Sacramento," and on train 14 Sacramento to Portland. Returning from Portland this car is being handled on trains 15-63-60 to Los Angeles. This service went into effect June 16.

SACRAMENTO SHOPMEN ARE HOSTS AT DANCE

The Shop Crafts Protective League entertained the employes of the Sacramento General Shops with a dance on June 8th. Several hundred Southern Pacific people and their friends were in attendance, including many from Roseville, Stockton, Oakland and San Francisco. Music was furnished by Mott's orchestra. During the evening elaborate refreshments were served.

The committee in charge of arrangements included: Wm. DeCosta, Wm. Regan, Ed. Schnauss, H. Reynolds and Louis Evans.

OGDEN BASEBALL LEAGUE IN FULL SWING

A keen fight is on for the top position in the Southern Pacific baseball league at Ogden. Four of the six teams have a chance to win. Reports from Ogden would indicate that the Superintendent's office team is favored for the championship, although they are topped just at present by the team from the Master Mechanic's office. With twelve more games to be played in the first half of the season, the standing of the league is as follows:

	Won	Lost	Perc.
Master Mechanic's	7	3	.700
Superintendents'	6	3	.667
Back Shops	5	4	.556
Car Shops	6	5	.545
Store Dept.	5	7	.417
Apprentices	1	8	.111

Employes' Traffic Tips Reach Record Mark

Increased Activity in Business-Getting Campaign Shown on Every Division. Portland Again Heavy Contender for Trophy in Second Quarter

SECOND quarter of the employes' business-getting campaign closed Saturday, June 30th. The division winning the handsome silver shield for this period will be announced in the August Bulletin.

Portland division employes are making a strong bid to hold the trophy for another quarter and during May rolled up a total of 18,945 points, bringing their standing for the quarter to 24,088 points and placing them ahead of the Los Angeles division which was in the lead last month.

In addition to their usual activity in obtaining tips on passenger business, the employes on the northern division, concentrated their efforts more on the heavy scoring freight business and their results show what a heavy score can be made during a month period.

The score indicated in this issue does not include any of the business obtained during June and the final score for the quarter is likely to show several changes in position of the divisions on the score board.

One year has passed since the business-getting campaign was started and each month has indicated an increasing interest among the employes on every division. The list of successful tips furnished the traffic departments has grown to such proportions that it has been necessary to change the style of make-up this month in showing the names of the successful business-getters. Both lists for passenger and freight business are considerably larger than for any previous month.

R. H. Holmes
Chief Clerk, Medford

Many novel and original ideas for obtaining information on prospective passenger and freight business have been adopted by the employes. These activities of the Southern Pacific men and women, whose duties are entirely apart from those of the regular solicitation forces, are highly commendable.

To encourage this salesmanship instinct and to provide the employes with practical suggestions for solicitation work, the campaign will be conducted along lines similar to other economy and efficiency movements of the Southern Pacific. Employes' business solicitation will be discussed at all loss and damage freight committee meetings. A traffic department representative will speak on some phase of salesmanship in transportation and the meeting will be held open for general discussion of employes. This plan will probably also be carried out at the safety and fuel oil committee meetings.

Portland Piles up Heavy Score During Month

Official Score Board

Division	May Credits	Total Credits
Portland	18,945	24,088
Los Angeles	1,290	10,794
Sacramento	2,100	4,605
Tucson	1,509	3,435
General Office	978	1,926
Coast	1,058	1,395
Western	488	788
San Joaquin	463	706
Stockton	321	352
Salt Lake	119	313
Steamer	91	156
East Bay Elec	45	88
Shasta	20	20

While agents and others in the regular business-gettnig forces of the Company are not eligible to compete in this campaign, a number of them have adopted plans of obtaining information on prospective business that may be suggestive to employes participating in the business-getting contest.

Agents A. E. Morgan, Mountain View, and H. H. Bunds, Gilroy, have adopted a plan of obtaining prospective passenger business, that might be followed out by other employes wishing to boost the score of their division. These agents have obtained lists from their local chambers of commerce showing names of persons who have made recent inquiries regarding those communities or have expressed a possibility of making their homes there. These names are turned in to the District Freight & Passenger Agent and the prospective business is solicited.

Fred Dangel
Dist. Yardmaster,
Los Angeles

M. D. Harrington, Agent at Hayward, recently offered a ride to a stranger whom he had started to pass in his machine. During the conversation that followed it developed that the stranger represented an Eastern manufacturing concern and before he left the machine he promised Mr. Harrington to sign a routing order covering a shipment with charges totaling about $700. The following day the routing order was presented and signed, giving Southern Pacific a long haul on the shipment.

This incident serves to bring out the fact that every person along the Southern Pacific lines is a potential customer. He may be planning a visit east or a vacation trip; he may be expecting friends or relatives to visit him; if he is a merchant or manufacturer he may possibly be influental in routing freight via Southern Pacific; or he may have a friend who is a likely customer for transportation service.

These are the sources from which many of the employes appearing regularly on the list of business-getters get their "tips." It is not always necessary to assume the role of a solicitor in order to help your division in this campaign. More often it is just a matter of "keeping an ear to the ground" for tips on possible business. Then when you have your tip, put this information on one of the cards found in each number of the Bulletin.

W. L. Harbert
Clerk, Santa Paula

Perhaps you have ideas or suggestions on employes' business solicitation that you would like to pass along. If so, write your suggestions to the Bulletin.

There are so many heavy point winners this month in both passenger and freight business that it is unfair to single out any particular ones. Albert F. Noth, Telegrapher at Medford, leads in successful passenger tips with 23 round trip interline tickets, 4 one way interline, 5 round trip local tickets and 2 one way locals. Prominent among the freight tips turned in was that of: R.H.Holmes, Chief Clerk at Medford, 25 standing routing orders.

E. W. Gill, ticket seller at the Ferry office in San Francisco, although a member of the regular passenger-getting organization and not eligible for this campaign, is deserving of special mention for his alertness in selling eight round trip tickets to New York going through Ogden and returning via Washington-Sunset route, also six one way tickets to New York.

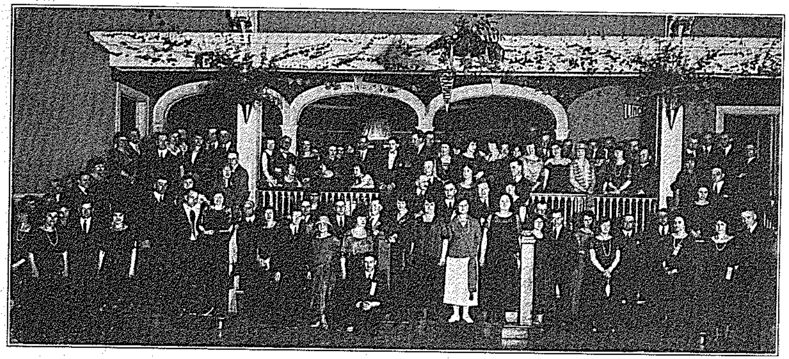
In the detailed list of business getters it has been necessary to abbreviate as follows: Int., "Interline Ticket;" RT., "Round Trip;" SRO., "standing routing orders."

SUCCESSFUL TIPS ON PASSENGER BUSINESS

Abrams, H., News Agent, Coast Div., S. F.	2½ Rt Int.
Ahern, J. T., Clerk, Aud. Valuation, S. F.	1 Rt Int.
Allen, A. L., Telegrapher, Hollister	3 Rt Int.
Alley, Frank M., Baggageman, Salem, Ore.	1 Rt Int.
Andre, Ivan, Marine Dept., San Francisco	1 Rt Int.
Armbruster, E. J., Collector, Portland	1 Rt Local
Arnold, R. J., Gen. Clerk, Frt. Dept., Portland	2 RT Int.
Arps, W. H., Train Baggageman, Lark, S. F.	1 Int. 4 Half Int.
Averill, Geo. W., Ind. Clerk, Local Frt. Office, S. F.	2 RT Int.
Backschild, P. W., Operator, Oakland Pier	1 RT Int.
Badt, J. A., Clerk, Aud. of Frt. Accts., S. F.	1 Int.
Baldwin, Frank D., Asst. Cashier, Eugene	20 RT Int.
Banks, Michael J., Roseville	2 RT Int.
Barton, B., Car Foreman, Los Angeles	1 Int.
Bavaro, Nick, Janitor, Oakland Pier	1 RT Int.
Bayless, J. A., Lineman, Coast, Div., San Jose	1 RT Local.
Beaton, K., Frt. Dept., Los Angeles	1 RT Int.
Beaumont, John F., Oculist, Portland Div.	1 RT Int.
Bee, B. E., Head Claim Adj., Frt. Claims Dept.	1 RT Int.
Behrens, Russel, Baggageman, Grants Pass	1 RT Int.
Bell, C. W., Brakeman, Coast Div., S. F.	1 Int.
Bergstrom, E., Steamer, Bay City	3 RT Int.
Bering, A. C., Special Accountant, S. F.	1 RT Int.
Beringer, Jennie L., Shop Clerk, Ogden	4 RT Local
Bertram, Paul, Clk., Local Frt. Office, S. F.	2 RT Int.
Bilow, Fred C., Yardman, Albany	1 Int.
Blackstone, Etta, Clerk, Modesto	1 RT Int.
Bloom, J., Report Clerk, Oakland	1 RT Int.
Bluett, S. P., Brakeman, Tucson	25 RT various, 10 Local various.
Boldefeld, Mr., Engineer, Western Div., Oakland	1 Int.
Bollander, L. P., Clk., Industrial Agt.'s Office, S. F.	1 Int.
Bornstein, S. P., Clk., Local Frt. Office, L. A.	2 RT Int.
Boust, W. W., Baggageman, Fresno	2 Int.
Boxill, A. E., Frt. Clk., Monterey	1 RT Int.
Brace, H. B., Operator, Reno	3 Int.
Bradshaw, Miss Pearl, Clerk, Stockton	2 RT Int.
Brady, D., Conductor, Los Angeles	2 RT Int.
Brash, K. M., Clerk, Shed "E," Coast Div., S. F.	1 Local, 2 RT Local.
Brenersee, S., Gen. Shops, Los Angeles	1 Int.
Bright, Merrill, Brakeman, Los Angeles	1 Int.
Brink, W. H., Clerk, Tucson	1 RT Local.
Brophy, D. W., Asst. Chief Dis., San Luis Obispo	2 RT Int.
Brown, Lewis E., Fireman, Los Angeles	2 Half Int.
Brunken A., Telegrapher, Grants Pass	2 RT Int., 4 Int.
Buchenery, H. P., Division Strkpr, Tracy	3 RT Int.
Bucket, Jos. H., Clk., Car Record Office, S. F.	1 RT Int.
Buckley, S. Arthur, Clk., Drumm St., S. F.	1 Int.
Burchard, Margaret E., Asst. Lease Clk., Portland	2 Local.
Burgoyne, N. D., Clerk, Oswego	1 RT Int.
Burke, A. F., Machinist, Roseville	2 Int.
Burnett, W. C., Telegrapher, Woodland	1 RT Int.
Burns, J. E., Brakeman, East Bay Elec. Div., Oak.	3 Int.
Burr, Ben. O., Rate Clerk, Fresno	1 RT Int. 1 Lodal.
Burrows, A. E., Cashier, Cottage Grove	1 Int.
Butte, Chris F., Asst. Chief Clk., Aud. Disb., S. F.	1 RT Int.
Butler, Mrs. R., Matron, San Francisco	1 RT Int.
Byrne, A. B., Clk., Aud. of Mis. Accts., S. F.	2 RT Int.
Cahill, Thos. W., Engineer, Coast Div., S. F.	1 RT Lolal. 4 RT Int.
Cairns, H., Brakeman, S. F.	1 RT Int.; 2 Int
Cairno, A. J., Brakeman, Ogden	2 RT Local.
Callanan, J. R., Fireman, San Joaquin Div., Fresno	2 RT Int.
Cardno, C., Boilermaker, Dallas, Ore.	1½ RT Int.
Carlson, F. W., Trainmaster's Clk., S. F.	1 RT Int.
Carnine, Arthur L., Yardman, Los Angeles	1 Int.
Carpenter, H. C., Telegrapher, Paso Robles	8 RT Int. 7½ Int.
Carpenter, R., Clk., Frt. Office, Phoenix	3 RT Int.
Cates, C. T., Operator, Polvo	2½ Int.
Cauthorn, Donald W., Signal Mtnr., McMinnville	1 RT Local.
Chaimov, P. M., Asst. Chf. Clk., Supt's Office, Port.	1 Int., 1 RT Local
Chambers, John F., Foreman, San Dimas	2 RT Int.
Charlston, W. C., Dining Car Steward, W. Oakland	1 RT Int.
Checketts, G. A., Trans. Clk., Ogden	2 RT Local.
Cherrie, C. X., Conductor, San Luis Obispo	1 RT Int.
Christensen, N. E., Cashier, Jct. City, Ore.	14 Local; 2½ Int.; 1 RT Int.
Christian, J. K., S. B. M. Woodland, Cal.	2 Int.
Clark, J. W., Head Clk, M. of W., Tucson	1 Int.
Clavio, P. C., Operator, Florence	1 Int.
Coaley, C. C., Claim Clk., Sacramento	1 RT Int.
Cogan, Miss Carrie M., Tel. Opr., S. F.	2 Int.
Coleman, C. C., Chief Clk., Roseburg	1 Local, 1 Int.
Coleman, Irving M., Clk., 4th & Berry Sts.	1 Int.; 1 Local; 1 1 RT Int.
Collins, Tom., Frt. Claim Dept., Coast Div., S. F.	2 RT Int.
Collins, V. D., Frt. Claim Dept., S. F.	2 RT Int.
Condon, J. C., Telegrapher, Coyote	1 RT Local.
Conn, Wm., Car Inspector, Eugene	2 RT Int.
Connolly, Miss L., Clk., Local Frt. Office, S. F.	2 Int.
Cook, Geo. W., Capt. Str. Transit	1 Local.
Cook, C. W., Baggage Clk., Richmond	2 RT Int.
Copenhaner, Jas. L., Car Clk., Corvallis, Ore.	6 RT Local.
Corcoran, H. C., Chief Clk., Claims Agt. O. Tucson	7 Int.; 3 RT Int.; 3 Local.
Coxon, Wm., Gen. Clk., Bowie	1 RT Int.
Craig, H. F., Secty. to GPA, Portland	1 Int.; 1 Local.
Craig, T. B., Conductor, Cochise	1 RT Int.
Crawley, Miss Nellie, Steno., News Bureau, S. F.	1 RT Int.; 3 Int
Crane, C. F., Trainmaster, Phoenix	5 RT Int. 2 RT Local.
Cramce, Chas., Sec. Foreman, Cornelius, Ore.	4 RT Int.
Crimp, S. M., Mgr. Telegraph Office, Portland	4 RT Int.
Crocker, E. C., Lease Clk., Portland	1 RT Local.
Crowell, A. C., Baggage Dept., L. A.	1 RT Int.
Cummings, F. L., Conductor, East Bay Elec., Oak.	1 RT Int.
Cunningham, Frank J., Yard Clk,, Bay Shore	2 RT Int.
Daly, Mr., Coast Div., S. F.	2½ Int.
Darling, Wayne, Cashier, Deming	1 Int.
Davis, E. W., T. B. M., Sacramento Div.	1 RT Int.
Davis, Vernon A., Mtl. Clk., Tucson	1 RT Int.
Davis, W. H., Conductor, Western Div., Oakland	2 RT Int.
Deitch, Jos., Steno., S. P. O., Los Angeles	3 RT Local.
Dietz, F., Engineer, Tucson	1 RT Int.
Delaney, W. B., Western Div., Oakland	2 RT Int.
De Marais, Karl, Clk., G. P. O., Portland	2 RT Int.
De Mattei, A. E., Asst. Chief Clk., Tel. Dept., S. F.	3 RT Int.
De Weese, Dollie, Steno, Fresno	14½ RT Int.
Dickinson, A. E., Steward, Com. Dept., W. Oakland	2 RT Int.
Dickson, R. L., Steno. DPO, L. A.	1 RT Int.
Dippold, Lucile Steno, Fresno	6 RT Int.
Dixon, Dr. H. B., Dist. Surgeon, S. F.	1 RT Int.
Donelson, Blanche E, Clk.-Steno., Albany	4 Int.; 4 RT Int.; 2 Local.
Dooley, J. F., Chief Clerk, Albany	1 Local, 1 Int. 3 RT Int.
Dorrance, H. G., Engineer, San Jose	1 Int.
Dougherty, Miss, Telegrapher, Roseville	1 Int.
Daw, Harry E., Brakeman, Tucson	2 RT Int.
Doyle, A. L., Engineer, Salem, Ore.	3 RT Int.
Drapper, Wm., S. P. Shops, Sacramento	1 RT Int.
Duarte, Wm. A., Elec., East Bay Elec., Div., Oak.	1 RT Int.
Duff, Mertle N., Steno., Portland	1 local; 1 RT Int.
Dunnagan, J. P., M. of W. Dept., S. F.	1 RT Int.
Eccleston, Albert S., Asst. Gang Foreman, L. A.	1 RT Int.
Egan, A. F., Warehouseman, Concord	1 RT Int.
Ellis, Ruth, Telephone Opr., Portland	1 RT Int.
Engberg, Thornwald, Second Office, Str., Solano	8 RT Int.
Englebright, H., Pensioner, Oakland	1 RT Int.
Edwin, W. E., Head Clk., Aud. of Misc. Accts., S. F.	1 Int.
Fallin, H. A., Clerk, Grants Pass	5 local; 1 RT Int.
Farley, J. E., Conductor, Coast Div., S. F.	1 RT Int.
Farrell, J. S., S. P. Co., Fresno	2 RT Int.
Farrow, H. W., Clk., Warehouseman, Sheridan	1 RT Int.; 1 Int.
Faul, W. J., Chief Yard Clk., Watsonville Jct.	2 RT Int.
Fegley, Ralph, Cashier, Corvallas	1 Int.
Files, T., Section Hand, Shasta Div.	1 Int.
Finley, A. H., Asst. Baggageman, Monterey	1 Int.
Folk, Sam, Clk., Western Div., Oakland Pier	1 RT Int.
Ford, J. R., Clk., Supt's. Office, Sacramento	6 RT Int.
Fraights, H. E., Chief Clk., Engineering Dept., Port.	1 Local.
Franklin, Albert J., Gen. Shops, L. A.	1 Int.
Frost, Dan., Chief Clerk, Motive Power, Oakland	1 RT Local.
Gaebring, Helen, Clk., Aud. of Pass. Accts., S. F.	1 RT Int.
Gallagher, J. B., Dispatcher, Oakland Pier	1 RT Int.
Galvesen, Korstein, Str. Dept., S. F.	1 RT Int.
Garcia, E. A., Head Timekeeper, Ogden	1 RT Local.
Gastineau, H. A., Brakeman, Western Div., Oakland	1 RT Int.
Gebauer, W. E., Commissary Dept., L. A.	2 RT Int.
Gerend, Mr., Clk., Exe. Office, S. F.	1 RT Int.
Gibbons, E. E., Clerk, Stockton	3 RT Int.
Gibson, E. P., Dispatcher, Bakersfield	3 Int.
Gifford. Robt., Conductor, Los Angeles	1 Int.
Gonzales, J., Warehouseman, Riverside	1 Local.
Goodwin, Mr., Purser, Str. Modoc	1 RT Int.
Gorham, N. W., Brakeman, Portland	2 RT Int.
Gould, H. W., Clk., Aud. of Dis., S. F.	1 Int.
Greenway, N. H., Chief Clk., DCH&R Accts, S. F.	1 RT Int.
Gross, Leonard, Baggageman, Eugene, Ore.	1 RT Int.
Grosse, H. S., Machinist, Stockton	7 RT Int.
Guerin, Frank J., Clk., Right of Way Dept., Port.	1 local; 1 RT Int.
Haddy, G. H., Clk., Supt's. Office, Sacramento	1 RT Int.
Hale, H. B., Messenger, Am. Ry. Ex. Co., S. F.	1 RT Int.
Ham, Ruth, Clerk-Steno., Eugene	2 Int.; 2 RT Int.; 1 Local.
Hammett, Lester, Bill Carrier, Portland	1½ Local.
Hanford, Mrs. B. V., Steno., Western Div., Oak.	1 RT Int.
Hansen, H. A., Night Foreman, Frt. Sta., San Jose	2 RT Int.
Hapgood, J. A., Adv. Clk., GPO, Portland	1 RT Int. 1 RT Local.
Harrigan, J. C., Clk., Supt's. Office, Sacramento	20 RT Local.
Hawtin, Horace G., Billing Clk., Albany	1 Local. 1 RT Local. 2 Int.
Heckendorn, R. D., OS&D, Local Frt. Office, L. A.	5 RT Int.
Herman, Mr., Conductor, Los Angeles Div., L. A.	1 RT Int.
Held, H., Clk., APA Office, S. F.	1 RT Local.
Heyburn, Jos., Asst. Car Distributor, San Jose	4 RT Int.
Higgins, M. J., Report Clk., City Tkt. Office, Oak.	1 Local.
Hilderbrand, J. W., Clerk, GPO	3 RT Int.; 3 local.
Hill, Guy, Chief Clk., GPO, Portland	2 RT Int.
Holland, W. B., Clk., Aud. of Mis. Accts., S. F.	2 RT Local.
Holmes, J. F., Traveling Auditor, L. A.	6 RT Int.; 5 Int.
Holmes, R. H., Chief Clk., Medford, Ore.	1 RT Int.
Houghton, Mrs. F. D., Cashier, Eugene	6 RT Int.; 1 Int.; 1 Local.
House, E. E., Pensioner, Oakland	1 RT Int.
Humbel, Wm., Train Baggageman, Coast Div., S. F.	2 RT Int.
Hunnrichs, W. C., Clk., Aud. of Pass. Accts., S. F.	7 RT Int.
Innes, Calder, Claim Agt., S. F.	1 Local.
Irwin, Zenas E., Clerk, Calexico	1 Local.
Jackson, C. L., Brakeman, Salt Lake Div., Ogden	2 local; 1 RT Int.

Jager, Mrs. Jacob, Clk., Jct. City, Ore.	4 Int.; 1 Local.
Jensen, Emil T., Baggageman, Paso Robles	1 RT Int.
Jensen, F. O., Deckhand, Str. Alameda	3 Int.
Jett, Ira T., Brakeman, Coast Div., S. F.	2 RT Int.
Johnson, H. A., Mail Clk., GPD, Portland	1 RT Int.
Johnson, R., Engineer, San Jose	2 Int.
Jones, Paul M., Clk., Bay Shore Roundhouse, S. F.	1 RT Int.
Kammerer, E. H., Electrician, L. A.	2 RT Int.
Kellogg, O. T., Clk., Gen. Mgr. Office, S. F.	2 RT Int.
Kelley, W. G., Statistician, DCH&R, S. F.	1 RT Int.
Kemler, Frank, Del. Clk., 4th & Berry, S. F.	1 Local.
Kenny, Jas. P., Chief Record Clk., Portland	1 Local.
Kenney, Thos., Clk., Executive Dept., S. F.	2 RT Int.
Kerby, A. G., Clk., Frt. Claim Dept., S. F.	4 RT Int. 1 Int.
Keyes, R. W., Opr., Telegraph Office, L. A.	5 RT Int.
King., M. T., Engineer, Coast Div., San Luis Obispo	1 RT Int.
King, T. E., RR. Police Officer, Sacramento	2 RT Int.
Kirkland, W. B., Trainmstr, Sac. Div., Sacramento	17 RT Local.
Knoth, F. A., Clk., Coast Div. S. F.	4 RT Int.
Koehler, C. H., Inspector, Oakland Pier	1 RT Int.
Korn, Ernest I., Clk., Warehouse, Eugene	2 RT Int.
Kornder, Peter C., Supt's. Office, L. A.	1 Int.
Krohn, H. H., Engineer, Coast Div.	2 RT Int.
Lambert, W. H., Clk., Aud. of Mis., S. F.	1 RT Int.
Larsen, Harry W., Chief Clk., East Bay Elec. Dic.	1 RT Int.
Lathrop, J. A., Tax & Right of Way Agt.	2 RT Int.
Lawler, Miss E., Clk., Aud. of Pass. Accts., S. F.	2½ RT Int.
Lee, W. H., Chief Clk., Tax & R. of W. Dept., Port.	3 RT Int.
Lehman, Chas., Baggage Dept., L. A.	65 RT Local.
Lehman, Dorothy, Steno., Bakersfield	1 Int.
Lemboke, J. E., Frt. Solicitor, Portland	1 RT Int.
Le Sage, P. O., Gen. Shops, L. A.	1 RT Int.
Levy, A. M., CC to GFA, Los Angeles	1 RT Int.
Levy, Miss, Clk., General Offices	2 RT Int.
Lind, W. M., Clk., Aud. of Mis. Accts. Office, S. F.	1 RT Int.
Lindblade, E. S., Engine Foreman, Oakland Pier	1 RT Int.
Linn, Miss Eunice, Clk., Stockton	2 RT Int.
Littell, Jas., File Clerk, GPA, L. A.	1 RT Int.
Littler, C. R., Adv. Agt., Los Angeles	58 RT Int.
Litzinger, Martin, Baggageman, Lodi	4 RT Int.
Livermore, C. D., CC to Agt., Calexico	6 RT Int.; 2 Int.
Lomba, Chas. Q., c/o Str. Piedmont	1 Int.
Lounsberry, Robt. R., Electrician, Dalls, Ore.	1 Local.
Magistretti, L. C., Loading Inspector, San Jose	1 Int.
Maldonado, Ramon, Sect. Foreman, Stockton	1 Local.
Matsler, W. J., Fireman, Tucson	1 RT Int.; 1 Int.; 2 Local.
Mathews, John W., S. P. Co., Bakersfield	1 RT Int.
Mathias, Miss M. L., Steno, DF&PA Office, Oak.	3 RT Int. 1 RT Local.
Maull, L. L., Operator, Bowie, Ariz.	2 Int.; 2 RT Int.
Maurer, M. E., Chief Clk. to Pres., S. F.	3 RT Int.
Maye, D., Engineer, Tucson	1 RT Int.
Mayer, A., Engineer, Coast Div.	1 RT Int.
Mayfield, D. F., Clk., Spec. Agt's. Office	1 Int.
MacPherson, W. R., Car Record Clerk, S. F.	1 RT Int.
McArdle, Frank L., Clk. Customs Attorney, S. F.	1 RT Int.
McCabe, C. R., Car Clerk, Albany	2 RT Int. 2 Local.
McCall, F. S., Machinist, Tucson	1 RT Int.
McClelland, Geo. L., Yard Conductor, Brooklyn	2 RT Int.
McCreary, B. R., Baggageman, Fresno	3 Int.
McDonald, Leo J., Head OS&D Clerk, S. F.	1 Local.
McEnerney, J. J., Car Foreman, Sacramento	3 Int.
McGregor, J. H., Clk., Aud. of Misc. Accts., S. F.	1½ Rt Int.; 1 Int
McGeorge, Francisc, Office Boy, Gen. Pass. D., Port.	2 RT Int.
McIndeor, John, Pipefitter, Bay Shore Shops, S. F.	1 RT Int.
McKinley, T. W., Chief Dispatcher, L. A.	1 Int.
McMackin, J. H., Engineer, L. A.	2 Int.
McMahon, H. J., Clk., Gen. Frt. Dept., Portland	6 RT Int.
McMurdo, Chas., Baggageman, Medford	1 RT Int.
Mergen, B. M., Conductor, Salt Lake Div., Reno	6 Int.
Meres, C. H., Operator, Lang	1 RT Int.
Meyers, Miss E. A., Tariff Clk., Gen. Frt. D., Port.	2 RT Int.
Mikulasck, Jos., Clk., Aud. Frt. Accts., S. F.	2½ RT Int.
Miller, D. J., Gen. Shops, Los Angeles	2 RT Int.
Miller, E. A., Telegrapher, Riddle	1 RT Int.
Mitchell, H. F., Aud. of Pass. Accts. Office, S. F.	1 RT Int.
Montgomery, Bessie, Clk., Frt. Office, S. F.	1½ Int.
Moore, J. C., Frt. Clk., DF&PA, San Jose	2 Int. 2 RT Int.
Morris, Miss L. R., Mail Clk., Frt. Claims D., S. F.	1 RT Int.
Morrison, M. R., Yardman, Coast Div., S. F.	1 Int.
Morse, Geo., Revising Clk., Portland	1 Int.
Mote, J. F., Head Clk., Aud. E&S Accts., S. F.	7 RT Local.
Mulks, Frank, Office Mgr., Exe. Office, S. F.	1 RT Int.
Mullen, Miss Helen E., Chief Tel. Op., S. F.	1 RT Int.
Musgrove, W. G., TBM, Tucson	4 Int. 1 RT Int.
Neal, W. E., Signalman, Fillmore	1 Local.
Nelson, P. H., Telegrapher, Medford	1 RT Int.
Niemi, Helen, Steno., Gen. Pass. Office, Portland	1 RT Int.
Northamer, G. P., Telegrapher, Fresno	2 Int.
Noth, Albert F., Telegrapher, Medford	23 RT Int. 4 Int. 2 Local. 5 RT Local.
Oberg, A. H., CC to Supt., L. A.	4 RT Int.; 1 Int
O'Connor, J. J., Dept. Boiler Foreman, Ogden	2 RT Local.
O'Grady, T. R., Operator, Lang	1 RT Int.
Olson, J. A., Pumper, Soledad	1 Int.
Olson, Ole, Deckhand, Str. Melrose, Oakland	2 RT Int.
Othus, P. M., Asst. Engineer, Portland	1 Local.
Olson, R. J., Cashier, Albany	2 RT Int.; 1 RT Local; 1 Local.
Owens, Laura, Steno., Gen. Pass. Office, Portland	1 RT Int.
Paddock, L. E., File Clerk, Supt's. Office	3 RT Int.; 1 Int.
Page, E. F., Conductor, Santa Cruz	1 RT Int.
Paige, R. R., Draftsman, Sparks	1 Local.
Palmer, W. E., Yardman, Brooklyn	1 RT Local.
Palmgren, W. D., Frt. Agt., L. A.	1 RT Int.
Pearce, C. J., Chief Clk., Purchasing Dept., Port.	1 Local. 1 RT Int.
Pennington, E. C., Frt. Agt., S. F.	1 RT Int.
Perry, Jas. W., Switchman, San Pedro	1 Int.
Persy, Charles, Section Foreman, Mt. Angel, Ore.	1 RT Int.
Peterson, Miss, Supt's. Office, L. A.	2 RT Int.
Philbrick, H. M., Conductor, Stockton Div., Fresno	1 RT Int.
Pickens, R. V., Clk., Local Frt. Office, S. F.	1 RT Int.
Pironi, Geo., Clk., Supt's. Office, Tucson	4 RT Int.
Potter, W. W., Conductor, Shasta Div.	3 Int.
Puelle, Anna M., Clk., Frt. Clm. Agt., Tucson	1 RT Int. 1 RT Local.
Purdin, R. L., Car Clerk, Marshfield	1 RT Int.
Rae, Miss Alice E., Clk., Aud. of Pass. Accts.	1 RT Int.
Ramsey, D. C., Revising Clerk, El Centro	3 Int.
Read, M. C., Clerk, Aud. Misc. Accts.	2 RT Int.
Reynolds, W., Clerk, Frt. Office, Phoenix	1 RT Int.
Rice, Ruby, Cashier, Mesa	1 Local.
Richards, R. A., Operator, Lodi	4 RT Int.
Riggin ,L. C., Conductor, Stockton Div., Fresno	1 Int.
Riley, Mrs. D. L., Matron, 3rd St., S. F.	2 RT Int.
Robinson, I. H., Conductor, Western Div., Oakland	1 RT local; 1 Int.
Rolfe, Mr., Stationary Engineer, Los Angeles	2 RT Int.
Rosenbaum, A. S., Claim Agent, Portland	10 local; 3 RT Int.
Ross, D., Head Clk., Supt's. Office, L. A.	2 RT Int.
Rowe, Dewey, Rate Clk., Bakersfield	1 Int.
Rushton, Geo. W., Foreman, Los Angeles	1 RT Int.
Ryan, Jas., Water Service Foreman, Ogden	2 RT Local.
Ryan, W. J., Engineer, West Oakland	2 Int.
Ryder, E. E., Secy. to Mgr. Din. Car Dept., S. F.	1 RT Int.
Salkeld, M. H., Gen. Shops, L. A.	1 Local. 1 RT Int.
Salversen, Karstein, Capt. Str. Santa Clara	1 RT Int.
Saunders, J. T., G. F. A., Los Angeles	1 RT Int.
Sawtelle, E. W., Messenger, Sac. Div.	3 RT Int.
Schab, Geo. C., Clerk, Orland	1 Local; 7 Int.
Scheik, F. M., Head Clerk, GPO, S. F.	2 RT Int.
Schofield, Wm. L., Rep. EMBA, L. A.	2 Int.
Schuh, A., Conductor, Nogales	1 RT Int.
Shaw, L. M., Clk., Aud. of Frt. Accts., S. F.	1 RT Int.
Sherer, B. F., Clerk, Aud. of Dis. Accts., S. F.	2 RT Int.
Sherrill, Glenn, File Clerk, Tucson	2 RT Int.
Shield, E. P., Chief Rate Clerk, GPO, L. A.	2 RT Int.
Simpson, R. D., Retired Conductor, S. F.	2 RT Local.
Simpson, R. L., Pensioner, S. F.	2 Int.
Simpson, Mrs. T. H., Steno., Tucson	2 RT Int.
Singer, Ben., Master Carpenter, Brooklyn	1 RT Int.
Smith, A. H., OS&D Clerk Frt. Station, San Jose	1 RT Int.
Smith, Nellie E., Steno., Bakersfield	1 Int.
Smith, R. J., Dist. Com. Agt., Portland	1 RT Int.
Spangler, W. L., R. H. Clerk, Tucson	1 RT Int.
Spear, W. A., Baggage Dept., L. A.	1 Int.
Spencer, F. G., Clerk, Aud. of Pass. Accts., S. F.	1 RT Local. 1 RT Int.
Spooner, J. F., Telegrapher, McMinnville	2 Local. 3 RT Int. 2 RT Local.
Sprinkel, Thos. J., Clerk, Jct. City, Ore.	4 Int.
Steiniger, Mr., Telegrapher Dept., S. F.	1 RT Int.
Stevenson, Jno., Clerk, Aud. Office, S. F.	2 RT Int.
Stinson, A. O., S. P. Co., Ferry Bldg., S. F.	1 Int.; 2 RT Int.
Stinson, L. L., Baggageman, Marshfield	1 RT Int.
Stockham, W. J., Section Foreman, Talent	1 Int.
Stoermer, Wm., Engineer, Los Angeles	2 RT Int.
Stone, F. N., Brakeman, Ogden	4 RT Local.
Sullivan, H. A., Conductor, Los Angeles	1 RT Int.
Sullivan, J. J., Trainmaster, Los Angeles	1½ RT Int.
Sumptner, G. C., Pullman Conductor, Oakland	1 RT Int.
Sundberg, Olaf E., Mach., Bay Shore Shops, S. F.	1 RT Int.
Taylor, W. H., Passenger Director, Oakland Pier	1 RT Int.
Teague, W., Asst. Chf. Clk., Gen. Mgr. Office, S. F.	2 RT Int.
Terry, W. W., Asst. Clm. Clk., GPO, Los Angeles	3 Int.; 1 RT Int.
Tharp, R. R., Operator, Exeter	1 Int.
Thiebold, W. W., Engineer, Sac. Div.	3 RT Int.
Thistlewaite, R. W., Brakeman, Coast Div.	1 RT Int.
Thornford, E. G., Clk., Aud. of Frt. Accts., S. F.	1 RT Int.
Todhunter, G. W., TM, Fresno	4 RT Int.
Toy, W. J., Retired Road Foreman, Ogden	2 Local.
Trousdale, E. W., Conductor, Ogden	1 RT Local.
Turner, C. D., Brakeman, Porterville	1½ Int.
Unger, C. L., Rep. Com. Dept., Portland	1 RT Local.
Utsinger, W. H., Bayshore Roundhouse	4 RT Int.
Vaughn, C. S., Team Track, Foreman, Portland	2 Local.
Wahlum, Ole, Ferry Str., Oakland	5 RT Int.
Walker, A. F., Rate Clk., Gen. Pass. Dept., Port.	2 RT Local. 1 RT Int.
Walters, L. D., Spec. Agts. Office, Tucson	1 RT Int.
Ward, J. E., Chief Clk., Supt's. Office, Sac.	3 RT Int.
Warner, Mrs., Commissary Dept., L. A.	2 RT Int.
Warren, J. E., Rate Clk., Pass. Dept.	11 RT Int.; 1 Int.
Watts, Mrs. Agnes, Clk., Gen. Pass. Dept.	4 RT Int.
Wendland, L. R., Fireman, Western Div., Oakland	2 RT Int.
Westfalls, B. F., C. B. Tucson	1 RT Int.

PORTLAND OFFICES JOIN IN DANCE PARTY



Southern Pacific employes at Portland are shown at an enjoyable dance party.

AN enjoyable dancing party was held in Murlark Hall, Portland on the evening of May 24th by employes from the various Southern Pacific offices in and around Portland. The dance came as the result of popular request and was very well attended. Much of the success of the party was due to the willing spirit in which the committee handled the details, but particularly is credit due to W. W. Evans of the Union Station for his work as floor manager.

The committees in charge were:

Union Station—Phil M. Chaimov, Alice Werren, Carmelita Hollis, W. W. Evans, Lester Jacobsen.

Yeon Building—Hal W. Hall, Margaret Burchard, Belle Countryman, Everett Crocker, Chas. J. Pearce.

Brooklyn—A. Kropp, Coral Fowler, R. P. Davis, T. Girdner, S. W. Laird.

Park Street Freight Station—B. D. Van Court, Mabel Fetch, G. Morse, A. W. Glutch.

The committees have already begun making plans for future parties.

Westington, W. A., Agent, 4th & Berry, S. F.	2 RT Int.
Whereat, L. A., Valuation Office, S. F.	1 RT Int.
Williams, G. E., Clerk, Stockton	3 RT Int.
Williams, Reginald J., Clk., Gen. Pass. Dept.	1 Int.
Williamson, G. K., Clerk, Oakdale	2 RT Int.
Willin, F. R., Engineer, Albany	1 RT Int.
Wilson, C. B., Voucher Clerk, Western Div.	1 RT Int.
Wilson, Mrs. Kate, Matron, Oakland Pier	1 RT Int.
Wilson, L. H., Telegrapher, Pacific Grove	3 RT Int.; 1 Int.
Winton, H. M. S., Clerk, Stockton	2 RT Int.
Wilfe, R. H., Telegrapher, Glendale, Ore.	2 Int.
Wolters, L. H., Rate Clerk, Dist. Frt. Office, S. F.	2 Int.
Wood, Geo., Conductor, Eugene	2 Int.
Woodson, F. R., Engineering Dept., S. F.	1 RT Int.
Wooley, G. A., Clk., Aud. of Frt. Accts., S. F.	1 RT Int.
Zellner, H. S., Brakeman, Western Div.	1 Int.
Zinn, W. W., CC, Baggage Room, Los Angeles	2 RT Local.

SUCCESSFUL TIPS ON FREIGHT BUSINESS

Abramson, A., Car Clerk, Roseburg	1 carload; 5 S.R.O
Addington, A., Asst. Cashier, Phoenix	1 L.C.L.
Arenz, M. P., Car Dis., Sacramento	2 carloads.
Armstrong, E. J., Col., Portland	4 carloads, 4 L.C.L.
Baldwin, F. D., Asst. Cashier, Eugene	1 carload.
Balfe, W. W., Clerk, Marshfield	1 L.C.L.
Barger, G. A., Rate Clerk, Eugene	1 carload, 6 L.C.L.
Barnes, G. L., Chief Clerk, Sacramento	10 carloads.
Burch, E. E., Rate Clerk, Salem	1 S.R.O.
Buchard, Miss M., Asst. Lease Clk., Portland	2 carloads.
Busch, George, Car Repairer, Brooklyn	1 L.C.L.
Carg, Emil, Clerk, Portland	2 carloads.
Carper, A. A., Chief Clerk, Salem	1 carload; 4 S.R.O.
Catlow, C. E., Revising Clerk, Portland	14 carloads.
Christensen, N. E., Cashier, Junction City	2 carloads, 1 L.C.L.
Clem, A. L., Car Foreman, Albany	1 carload.
Cowgill, Max G., Warehouseman, Eugene	1 S.R.O.
Coxon, William, Clerk, Bowie	1 L.C.L.
Crafton, L. J., Cashier, Roseburg	12 S.R.O.
Dole, J., Clerk, Independence	5 S.R.O.
Dooley, J. F., Chief Clerk, Albany	1 carload.
Dorrance, H. G., Engineer, San Jose	1 L.C.L.
Fagley, Ralph, Clerk, Corvallis	1 carload, 1 L.C.L.
Fallin, Howard A., Clerk, Grants Pass	1 carload; 7 S.R.O.
Ham, Mrs. Ruth I., Clerk, Eugene	1 carload; 1 L.C.L
Hawtin, H. G., Bill Clerk, Albany	1 L.C.L.
Hayburn, J., Asst. Car Dis., Sacramento	5 carloads.
Hicken, J. R., Car Clerk, Portland	3 carloads.
Holmes, R. H., Chief Clerk, Medford	25 S.R.O.
Hoover, James, Clerk, Wheeler	1 S.R.O.
Houghton, F. L., Cashier, Eugene	1 carload.
Howard, H. K., Clerk, Dallas, Ore.	4 S.R.O.
Howard, Victor, Car Dis., Portland	30 carloads.
Hutchinson, A. L., Clerk, Portland	1 L.C.L.
Jackson, C. L., Brakeman, Salt Lake Div.	1 L.C.L.
Jager, Jacob, Clerk, Junction City	1 L.C.L.
Jennings, Charles H., Clerk, Salem	2 carloads.
Jessup, J. O., Clerk, Myrtle Point	2 carloads.
Kent, Miss Helen C., Clerk, Salem	3 carloads; 3 S.R.O.
Kester, F. K., Clerk, Salem	4 S.R.O.
Kinney, James P., Chief Rec. Clk., Portland	2 carloads; 6 L.C.L
LaRoy, W. C., Car Clerk, Portland	4 carloads.
Lafferty, C. D., Chief Clerk, Corvallis	14 S.R.O.
Lemmer, P. W., Clerk, Lakeside	1 carload.
Leslie, George M., Car Dis., Portland	15 carloads.
Livermore, C. D., Chief Clerk, Calexico	2 carloads, 1 L.C.L.
Luther, A. E., Cashier, Salem	2 carloads.
Machado, George, Clerk, San Jose	1 carload.
Martin, W. R., Clerk, Albany	1 carload.
Mertz, E. P., Chief Claim Clerk, Portland	1 L.C.L.
Mulligan, J. W., Car Dis., Portland	13 carloads
Myers, M. D., Clerk, Portland	1 L.C.L.
McDonald, L. J., Head OS&D Clerk, San Jose	1 L.C.L.
McMurdo, Charles, Baggageman, Medford	2 S.R.O.
Orrell, P. M., Clerk, El Monte, Cal.	6 L.C.L.
Palladini, C. C., Claim Adjuster, Fresno	1 carload
Petterson, V. M., Car Dis., Roseburg	15 carloads
Rice, Ruby, Cashier, Mesa	1 S.R.O., 9 carloads, 41 L.C.L.
Rosebush, Miss A., Clerk, Sacramento	1 carload.
Scharbach E., Clerk, Mt. Angel	1 S.O.R.
Senters, Roy, Clerk, Silverton	5 S.R.O.
Smith, H. L., Yardman, Albany	10 carloads.
Sprinkel, T. J., Clerk, Junction City	1 L.C.L.
Starr, Harry C., Operator, Portland	1 S.R.O.
Stinson, L. L., Baggageman, Marshfield	5 S.R.O.
Thorn, T. C., Roundhouse Frm., Jct. City	1 carload.
Vaughn, C. S., Clerk, Portland	1 carload.
Ward, J. E., Chief Clerk, Sacramento	1 carload.
Wilson, A. B., Roundhouse Frm., Albany	1 carload.

SAN FRANCISCO CLUB HOLDS NOVEL DANCE

Serpentine and paper hats were novelties of Good Service League's recent dance in San Francisco.

GENERAL OFFICE BASEBALL TEAM WANTS GAMES

Employes at the General Office in San Francisco have organized a baseball team and are anxious to arrange games with other Southern Pacific teams. Several department teams have been playing independently for several weeks and from this group of players it is expected that a strong team can be put in the field. Games can be arranged through Manager W. C. Hunrick, Room 429, General Office.

AUDITORS' TEAMS ENJOY A SLUGFEST AT OAKLAND

Baseball teams from the Auditors' office and the Auditor of Disbursements' office engaged in a slugfest in Oakland on June 16, the Disbursement representatives coming out on the long end of a 17 to 11 score. McGough struck out seventeen for the losers, but was rendered very loose support when it came to the pinches. Sherin was relieved on the mound by Fouseca in the sixth for the Disbursement team. Makowsky and Fouseca featured with home runs for the winners. The lineups were:

Auditor Disbursements—Garlich, c.; Fouseca and Sherin, p., rf.; Frailey, 1b.; Glee, 2b.; Makowsky, ss.; Liddicoat, 3b.; Cole, lf.; Carroll, cf.

Auditors—Mortenson, c.; McGough, p.; Kendall, 1b.; Filene and Peterzon, 2b.; Lewis, ss.; Kervin, 3b.; Escalla, lf.; Foster, cf.; Jargenson, rf.

SEVERAL hundred employes and their friends attended the novelty dance given by the Southern Pacific Good Service League at San Francisco on June 5th. Serpentine, paper caps and whistles added a gay carnival effect to the affair.

Social activities of the San Francisco club continue to grow in popularity and it has been necessary to find a larger hall in which to hold the regular monthly entertainments.

The entertainment committee is greatly encouraged over the record attendance at the recent dance and at a meeting of the executive committee it was decided to promote the social functions on even a larger scale. The committee is working on a number of special events which will be announced later. The next dance will be a "Spot Dance" and will probably be held July 17. Circulars will be distributed giving all details.

Important business matters connected with the future policy of the organization, such as the possibilities of extending the scope of the Good Service League, the building of a club house and formulating an extensive athletic program, will come up for consideration. L. C. Ioas, president of the club, is anxious that every employe interested attend this meeting.

A Penny Wise

"Abie, mein son, why for you go der shtairs up two at a time?"

"To save mein shoes, father."

"Vell, be careful you don't shplit your pantz."

RECENT CHANGES MADE IN SAFETY COMMITTEES

Following changes were made in safety committeemen account of expiration of terms, transfers and leaving the service:

Steamer Division—H. Plomgren, Captain, vice S. Forsberg; John Souza, Captain, vice W. J. Susan; Sigwart Gunderson 1st Officer, vice G. J. Larson; Camila Allara 2nd Officer, vice H. J. Hansen.

Los Angeles Gen. Shops & Stores—T. F. D'Oyly, Tinsmith, vice Edw. Donhost; C. J. Humphreg, Machinist, vice C. T. Holmes; W. C. Haitman, Boilermaker, vice Ray Dixon; P. Freeman, Blacksmith, vice Thos. Adams; S. M. LaMotte, Electrician, vice E. H. Kamerer; G. E. Smith, Sheet Mtl Worker, vice E. A. Tinker; R. R. Palmer, Crane Operator, vice R. E. Jones; J. B. Carrington, Wood Worker, vice C. W. Mitchell.

Coast Div. Terminal & Shop—J. D. Burke, Secretary, vice L. R. Carroll.

San Joaquin Division—T. O. F. Smith, Engineer, vice C. W. Bradley; F. B. Cranmore, Fireman, vice W. E. Leeper; W. B. Palmer, Shopman, vice M. L. Giddings; C. B. Cooper, Conductor, vice W. H. Schultz; C. W. Merrill, Brakeman, vice G. A. Wright.

Los Angeles Division—C. W. Candless, Supsr. B&B, vice J. Gratto.

Teacher: "Johnny, how old is a person who was born in 1894?"

Johnny: "Man or woman?"—Ex.

RECORD SET IN INSTALLING 100-FOOT TURNTABLE

Record time for the installation of 100-foot turntable was established at San Luis Obispo on May 28 when a construction crew removed the old table and had the new one in operation in 5 hours 32 minutes. The previous record was made at Ashland, March 16, 1922, when a 100-foot table was installed in 10 hours 12 minutes.

Twenty-eight Bridge & Building men and 25 track men were employed in the installation, working under the supervision of P. M. Nelson, Supervisor of Bridges and Building, Coast Division, P. Goulden, Roadmaster San Luis Obispo district, and J. W. Stephenson, Foreman Bridges and Building gang.

The work was so arranged that there was no interference in the movement of traffic, and during the installation two freight trains were started east, two 4-engine trains and one 3-engine train west, and three trains were received.

The new turntable was constructed alongside the pit, enabling the existing 70 foot table to be kept in service until actually taken out. A framed timber trestle was constructed leading from the rims of the pit to the center and the old turntable was lifted out by the wrecking crane and placed on a flat car. The old stone center was also removed and the new concrete block weighing 8 tons set in place.

The table was constructed on a timber frame on a 2.48 per cent grade over which it was launched by means of a double line of rollers so gauged as to fit the journals of standard car axles and using standard brasses and wedges. In placing the table it landed exactly over the center but it was necessary to lower it 20 inches by means of four 50-ton Norton jacks, two on each side, to bring it to its bearing.

Work of installation was started at 7:30 a.m. and in one hour the old table was loaded on a flat car and backed away. The wrecker was hooked on the new turntable at 10:25 and the table was down at 12:50. Ten minutes later it was turned empty and immediately after turned with an engine.

MANY AVOIDABLE ACCIDENTS CITED DURING MONTH

Machinist testing steam pipes on front end of an engine, using an iron gland weighing about 15 pounds, laid the gland on a bench and it rolled off onto his foot, resulting in severe bruises. This injury was caused by carelessly placing the instrument in a position so that it could roll off his bench.

A similar accident happened when a boilerwasher was struck on the head by a wrench which had been carelessly placed in an unsafe position by another employe working above him.

Recent Leaders In Fuel Saving

THE persistent efforts of men engaged in engine service has been one of the main factors in placing the Southern Pacific Company at the head of all railroads in the United States in fuel conservation.

The April honor roll shows the names of those who excelled in fuel performance during that month, but honorable mention must be made of those engineers and firemen who are working hard to gain recognition.

Successful contenders for honors in April follow:

WESTERN DIVISION

Engineer	Address	Firemen	Address
C. G. Thomas	Oakland	C. H. Cunningham	Oakland
J. R. Falvey	Oakland	M. Mullen	Oakland
L. F. Braswell	Oakland	J. E. Ramey	Oakland
H. B. Cook	Oakland	D. V. Kreigh	Oakland
C. R. Kimic	Oakland	K. F. Wildeson	Oakland
SACRAMENTO DIVISION			
A. J. Schwestka	Roseville	J. H. Mueller	Roseville
W. J. McKnight	Roseville	G. W. Bryant	Roseville
N. S. Young	Roseville	A. H. Whitmore	Marysville
W. W. Tassie	Sacramento	C. A. Dungan	Sacramento
E. J. Tibbetts	Roseville	E. E. Smith	Roseville
SALT LAKE DIVISION			
J. Corron	Sparks	C. D. Hewitt	Imlay
G. W. Waltenspiel	Imlay	C. M. Conner	Imlay
H. J. Grubnau	Sparks	B. E. Eager	Sparks
H. Ward	Sparks	W. L. Warren	Sparks
B. F. Cauble	Sparks	J. O. Bath	Sparks
J. J. Rowse	Montello	F. Blumenstein	Montello
J. Kesler	Ogden	A. Miller	Montello
N. Gudmundson	Ogden	F. B. Swartz	Ogden
F. R. Birdsall	Carlin	D. Wolcott	Carlin
SHASTA DIVISION			
F. W. Halsey	Dunsmuir	R. W. Harrell	Dunsmuir
A. G. Selby	Dunsmuir	J. W. Magness	Dunsmuir
C. B. Geer	Redding	C. H. Huxtable	Dunsmuir
G. W. McDowell	Dunsmuir	B. Bachand	Dunsmuir
C. M. Duggan	Dunsmuir	A. A. Derby	Dunsmuir
PORTLAND DIVISION			
A. M. Chamberlin	Brooklyn	C. A. Meyers	Brooklyn
W. A. Anderson	Portland	W. B. Rufner	Portland
D. J. Gawler	Roseburg	C. A. Machen	Roseburg
B. F. Ryan	Roseburg	W. L. Barker	Roseburg
C. L. Towers	Roseburg	D. C. Lindgren	Roseburg
COAST DIVISION			
A. R. Bullard	San Francisco	J. J. O'Connell	San Francisco
F. McHenry	San Luis Obispo	W. F. Kuhl	San Luis Obispo
H. F. Bell	San Francisco	J. D. Ivey	San Francisco
C. W. Tenney	San Francisco	E. T. Childs	San Francisco
H. W. Altmeyer	San Jose	V. J. Martella	San Jose
STOCKTON DIVISION			
S. E. Hickson	Fresno	A. R. Turner	Tracy
W. W. Thompson	Tracy	O. Dowd	Merced
C. E. Grass	West Oakland	A. C. Kolb	Fresno
E. R. Saupaugh	Tracy	E. A. Pope	West Oakland
D. C. Sparks	Tracy	E. C. Bigelow	Stockton
SAN JOAQUIN DIVISION			
L. J. Whyers	Bakersfield	H. B. Shepardson	Bakersfield
H. E. Dawe	Bakersfield	C. P. Emmert	Bakersfield
W. F. Thorne	Fresno	E. L. Ford	Fresno
J. H. Tyler	Fresno	R. L. Irwin	Bakersfield
J. H. Kirk	Bakersfield	E. Strunk	Fresno
LOS ANGELES DIVISION			
T. S. Early	Los Angeles	C. R. Thompson	Los Angeles
W. E. Stoermer	Los Angeles	Roy W. Moore	Los Angeles
F. L. Cram	Los Angeles	G. M. Clayton	Los Angeles
W. C. Morgan	Los Angeles	R. A. Fagan	Los Angeles
G. F. Parks	Los Angeles	F. C. Henville	Los Angeles
TUCSON DIVISION			
J. C. Kroeger	Tucson	W. C. Henrich	Tucson
C. H. Lee	Tucson	M. C. Weinzapffel	Tucson
W. F. Gilson	El Paso	J. Otis	El Paso
E. T. Bower	Tucson	C. H. Moore	Tucson
J. L. Flood	Yuma	P. W. Dougherty	Patio

A machinist apprentice's fingers were severely lacerated by being caught in the revolving cutter of a milling machine when he attempted to remove turnings while the machine was in motion. Had he observed standing instructions to remove turnings with brush, the accident would have been avoided.

Inattention to his work caused a machinist apprentice to suffer bruised toes when a piece of steel which he was cutting with a hacksaw fell on his foot. His attention was attracted to something else going on in the shop and he was not watching what he was doing. An example of gross carelessness.

WITH THE S. P. IN MEXICO CITY

Avenida Cinco de Mayo, named in commemoration of the Battle of Pueblo, a famous Mexican historical event, presents a typical street scene of Mexico City. On this avenue are located the offices of the Southern Pacific Company.

By H. C. CARRASCO, Accounting Department

The following interesting account of a visit to the offices of the Southern Pacific in Mexico City was written by Mr. Carrasco on returning from a vacation spent in the southern country.

CROSSING the "Plaza de la Constitution" or the "Zocalo," by both of which names that famous open space in the City of Mexico is called, I was hailed in tolerable English by a poorly dressed individual. The stranger, a Mexican, asked for alms and finding the sound of my native tongue not unwelcome, I started a conversation. He told me of the interesting points of the city and finally directed me to the Avenida Cinco de Mayo (5th of May Avenue is the English of the name) where the headquarters of the Southern Pacific are located.

This avenue is one of the principal business streets of the City. On it are located most of the railroad and financial headquarters. It is modern in every respect with plate glass windows, up-to-date electroliers — and traffic police. The traffic police manipulate a kind of semaphore with an umbrella-parasol arrangement as a shelter from sun and rain. One arm of the semaphore carries the word "Alto" or "Stop" and the other "Adelante" which means "Go Ahead." The signals are obeyed just as in our country by a scurry of automobiles, teams and a cosmopolitan crowd of people.

I found the Southern Pacific office building at Number 32, but not finding the name of the Company displayed, as the foyer was being remodeled, I entered the elevator and asked my way in bad Spanish and received the laconic answer "Piso tres." By the time I translated this to "Third Floor" I was at the door of the suite of offices carrying the familiar name of our employers.

A young man greeted me and on hearing that I had no particular business other than that of an employe from the San Francisco General Offices paying his respects, he changed the medium of conversation from Spanish to English which he spoke excellently, particularly so when considering that he had not acquired the language in the United States but in Spain (he is a Spaniard) and Mexico. Unfortunately I failed to obtain his name but from a list of employes of the Mexican Offices, since coming to my notice, I would identify him as Senor Manuel V. Ruiz.

The offices are modern and pleasant. On the walls are designed pictures and posters distributed by our Traffic Department, calling attention to interesting points on our lines. Here I learned the great Mexican undertakings of the Southern Pacific Company such as the Southern Pacific Railroad Company of Mexico, the East Coast Oil Company, etc., are focused as well as matters affecting the Mexican interests of the Southern Pacific's American lines. Negotiations with the Mexican Government are handled by George F. Jackson and F. V. Stark, the General and Assistant General Agents, respectively, both of whom are accomplished in the language of the Country and, it goes almost without saying, thoroughly understand the Mexican psychology. Among their tasks is the collection of bills, arising from damage to property, etc., during the revolutionary days.

Mr. Jackson favored me with a long talk about Mexico. Mr. Jackson stated that he had been in Mexico for some thirty years and he displayed a comprehensive and detailed knowledge of the political, commercial and financial conditions in our greatly disturbed neighboring republic.

We talked much about the Southern Pacific of Mexico which extends far down the west coast to Tepic, a point not more than one hundred and fifty miles from the City of Mexico. I asked why the line had not been constructed through to connect with the lines of the Mexican National Railways leading into Mexico City, and was informed by Mr. Jackson that events of the past ten years in Mexico had halted such an undertaking. Now as the result of the more settled conditions work on this connection has been started.

As we chatted our talk was punctuated with peals of thunder and heavy hail beat on the windows. Expressing my wonder at the display, I was reminded that this was the beginning of the "wet" season. At intervals as the hail abated somewhat we stood on the balcony and watched the people scurrying in the streets and the forked lightning playing against a blank canopy of heavy nimbus which overhung the centuries-old city.

This privilege of being in close touch with the representatives of my employers, although in a foreign country, was a new experience and I was filled with pride in being brought to realize something of the magnitude of the Southern Pacific Company's organization.

PA BUCKLEY THOUGHT SON TIM WAS IMPOSED ON

John Buckley, section foreman for the Southern Pacific at Pittsburg, Cal., is the proud father of Tim Buckley, who is at present making good on the pitching staff of the San Francisco Seals. A story running somewhat as follows recently appeared in one of the bay newspapers:

It is said that the father knew very little about this game of baseball that his son was so absorbed in, so he made a trip to the training camp to get an idea what sort of sport this game was. When he arrived at the park luck would have it that Tim was pitching in one of the exhibition games. The lad was tired from long exertion and his control was slightly off, so he was motioned into the outfield. Pa Buckley watched in silence as his offspring walked to the outfield.

"Well," said Buckley Sr., when his indignation would hold no longer, "well, if Tim couldn't throw that ball from where he was standing (the pitcher's box), how the devil is he going to throw from 'way out there?"

KRUTTSCHNITT

(Continued from Page 19.)

trend of current and future economic development:

Much idle time and fuel can be saved by carefully designed engine terminal facilities, such as hot-water boiler-washing plants, well located supply tracks, etc., and above all ample shops and modern tools to make repairs quickly.

On a division operated with consolidation locomotives where water is exceptionally good, 16,000 pounds of fuel are saved per locomotive per annum by the installation of a hot-water boiler-washing plant.

Such improved facilities, while requiring large capital outlay, will increase the productive time of locomotives.

The burning of fuel in large terminals and shops should be centralized as far as practicable in order to eliminate starting and stopping losses. Through free use of individual electric motors on large tools and groups of small tools the waste of running long lines of shafting, operating tools needlessly when but one or two on the line are used, can be eliminated and substantial economies can be effected in the 16,000.000 tons of fuel consumed on railroads in shops, stations, etc., etc. Twenty per cent of the power in a large railroad shop was saved by eliminating steam-pipe losses and 13 per cent more by abandoning long lines of shafting and many belts through the substitution of electric for steam power. The changes represented a saving of $120,000 per year.

In locations where electrical energy can be purchased at lower cost than it can be produced by the railroad, opportunities for substantial fuel savings are presented.

The effect of all of the factors influencing increased work obtained out of fuel. is shown for Class I railroads in table A, giving the pounds of fuel consumed to move 1,000 gross ton-miles, that is, combined weight of locomotive, cars and lading, for 1920, 1921 and 1922, the only years for which complete data are available; and in table B for a system of over 11,000 miles, for which data are available for 10 years:

A	
1920	172
1921	162
1922	163
Decrease	5.2%

1922 results were adversely affected by tonnage losses due to coal strike.

B	
1913	199
1915	173
1917	164
1919	150
1921	151
1922	148
Decrease	26%

It must be remembered, however, as to these figures that improvements in the design of the locomotives themselves and the better conservation of heat given out by the fuel were not accomplished in a short time, but follow the gradual use of better designs and fuel-saving devices. The railroads in the past ten years have applied fuel-saving devices of proven worth quite freely. There are some 64,528 locomotives in the United States, of which approximately 44,700 are now equipped with brick arches, 33,300 with superheaters and about 300 only with feed-water heaters. The number of feed-water heaters is extremely small; they have but recently been introduced into the United States, but it is encouraging to note that 360 are included in locomotives now under construction.

It is interesting and encouraging to observe from the table given above that, barring occasional reverses, the improvement in the work obtained from a pound of fuel is constant, but it is neither interesting nor encouraging to reflect that we are indebted to European engineers for most of the improvements now in use on our locomotives. This is the case with the improved outside valve gear, superheaters and feed-water heaters, some details of which, however, have been designed by American engineers, but nevertheless it is mortifying to admit that the principles underlying these devices were not first used in our country. The reason of course is that heretofore fuel has been so cheap and easily obtained with us that there was little inducement to pay much attention to its conservation; conditions have radically changed in the last few years, however.

The two principles affecting most profoundly the efficiency of stationary steam engines are compounding and condensing. Compounding alone increases the efficiency of an engine from 12 per cent to 15 per cent, and condensing alone may increase it as much as 30 per cent, that is, condensing alone would increase the efficiency of fuel consumption of locomotives nearly as much as brick arch, superheater and feed-water heater combined, which we have already seen amounts to 34½ per cent. Compounding, which has been used in the United States, at one time very much more than now, will certainly come into use again; so that the combined effect of all the devices we have described, with compounding and condensing superadded, would be:

Brick arch would reduce fuel consumption to 91.0%
of the normal consumption at the present time.
The superheater added would reduce it to 72.8%
The feed-water heater added, to.65.5%
Using condensing engine, to....49.1%
Compounding, to 42.7%

Our European railroad brothers are fully alive to the advantages of using a condensing engine on the locomotive, as evidenced by descriptions that have appeared in the technical press in the past year or two.

Turbine Locomotives

Swiss Federal Railways, says the Railway Review of April 16, 1921, are testing a 10-wheel type locomotive, with superheater, driven by a condensing steam turbine, located on locomotive frames in front of smoke box. Power is transmitted through reducing gears to a horizontal crankshaft, which in turn transmits it to three pairs of drivers. The turbine makes 8,000 revolutions a minute. Exhaust from turbine is condensed in condenser located under boiler, with water supplied from tender. This water used in condensation is cooled down by dripping from the specially designed tender roof, which extends as a hood over the tender. The draft is furnished by a special fan located in front of the firebox, no steam being wasted to produce a draft in the firebox. It is claimed that tests so far show reduction of fuel consumption of 25 per cent compared with compound locomotives of usual construction, and very smooth running at high speeds on account of the reduction of heavy reciprocating parts.

Swedish State Railway has built a turbine locomotive described in the Railway Review, August 12, 1922. It consists of two units. The front unit, or what is usually the locomotive, carries the fuel in saddle tanks on the rear end of the boiler; it also carries the condensing plant, the superheater and an independent turbine-driven draft fan and an air pre-heater. The tender on which the machinery rests is supported on a truck with six driving wheels 73 inches in diameter and on a trailer with two 33-inch wheels. The motive power is furnished by a condensing steam turbine of 1,800 horse-power carried on the front end of the tender, which by means of re-

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Purpose of A Railroad

THE purpose of a railroad is the safe and prompt transportation of the persons and property of the people. A simple proposition; yet that this purpose be properly carried out requires one of the most complete and complex establishments in the world of industry.

In most commercial plants the problems are confined to the elements of production along more or less arbitrary lines. With the railroad the elements of production are unconfined in that they are affected by a multitude of causes having their origin without the circle of operation and beyond control of operating agencies.

Governments, individuals, organizations, economic vagaries, theories, material, crops, weather, wages, policies, and the demands of investment are some of the factors to be confronted and survived. Yet in all and with all, the details governing the transportation of property and persons are carried on with an individual and collective integrity unequalled in the history of modern business.—S. P. Bulletin (Atlantic System.)

duction of gear drives the three pairs of coupled wheels. The locomotive develops a maximum tractive effort of 27,000 pounds and is designed to operate in fast passenger service up to 60 m. p. h. In a local run of 82 miles with a 600-ton passenger train the coal consumption showed a reduction of 50 per cent below that of a Pacific type locomotive, which it replaced, averaging 67 pounds per thousand ton-miles; with a through train—it fell to 37 pounds per thousand ton-miles.

The most original and interesting feature in this locomotive is the air pre-heater, designed with the superheater to utilize the heat in the waste gases of combination, which leave the ends of the boiler tubes at a temperature of about 600° F. The draft in the firebox, supplied by a fan, is free of the sharp blasts of the ordinary locomotive, and avoids shaking up the fire and blowing unconsumed fuel out of the stack.

High pressure steam from the superheater passes directly to the main turbine, to the independent draft turbine and to boiler feed-pump. This feed-pump forces the condensate into the boiler through three feed-water heaters in series, in which the feed water is raised to a high temperature with the exhaust steam from the auxiliaries and main turbine.

It is claimed that this locomotive, known as a Ljungstrom Locomotive, shows a fuel consumption of about 50 per cent only of that of a Pacific type locomotive, which it replaced on its present run.

The London and Northwestern Railroad has built an experimental locomotive driven by a condensing turbine which operates a generator, and the power is applied to the driving wheels through four electric motors of 275 horsepower each. The condensing apparatus is carried on the rear one of a double unit.

Electric Locomotives

Where electric current can be generated from water power, trains can be moved very cheaply, but where the current is generated in a steam plant the advantages are not so patent.

The United States Geological Survey Professional Paper No. 123 gives the best fuel rate of eight large steam-electric plants, out of a total of 400 plants studied in 1919, as 2.14 lbs. of coal, or 28,000 B. t. u.'s, to produce one kilowatt hour; hence as one kilowatt hour equals 3,413 B. t. u.'s, the loss in converting the energy in coal into electric energy was 24.587 B. t. u.'s, or 87.8 per cent; in other words, out of 1,000 h. p. potential energy in coal, 878 h. p. is lost in converting it into electric energy by the most modern and efficient steam boilers and engines driving the most efficient electric generators then known. This leaves 122 h. p. available. In transmitting this power to motors of an electric locomotive the average loss is 19 per cent, or 23.18 h. p., leaving 98.82 h. p. out of the original 1,000 available for work; but the internal losses of the electric locomotive will consume 15 per cent of this amount, reducing to 84 h. p. the energy to move trains. The efficiency of the fuel from coal to driving-wheel contact with rail is but 8.4 per cent. The corresponding efficiency of a modern steam locomotive with arches, superheater and feed-water heater is 8.1 per cent under favorable conditions. While under average conditions at the present time the advantage may be more than the 3.7 per cent indicated in favor of the electric locomotive, the spread is hardly attractive enough to tempt capital to assume the expense of interest, depreciation, tax and maintenance expenditures that would have to be incurred in changing from steam to electricity generated in a steam plant. The soundness of this conclusion was demonstrated by studies made of the Sierra Nevada and other heavy grades on the Southern Pacific, where trains are lifted 6.854 feet in 86 miles. Assuming the current generated in a steam station, the interest, taxes, depreciation on additional net plant required were demonstrated to be more than three times as great as the estimated savings in operating costs to be obtained from electric operations.

Transportation Must Be Put On Solid Basis

The Joint Commission of Agricultural Inquiry, United States Congress, in its report of February 1, 1923, said:

THE transportation facilities of the country must be placed upon a solid foundation.

It will not do to make up deficits by appropriations of public funds. The railroad companies must be operated with the expectation that the gross revenues will be sufficient to cover operating expenses and leave a reasonable return upon the investment.

It is of paramount importance to the public welfare that the transportation companies be made going concerns; that they be placed upon a substantial foundation in every respect; and that the operating expenses be reduced by careful and efficient management.

Other considerations, such as smoke prevention, increasing capacity on heavy grades, may influence the problem, but we cannot recall any instance of a change being made, where a steam generated current was used, solely for saving fuel. The steam locomotive is by no means as obsolescent as the propagandists for electric traction would have us believe. In an address "The Last Stand of the Reciprocating Steam Engine," published in the March, 1920, edition of the Journal of the American Institute of Electrical Engineers, a fuel consumption of 100 pounds per 1,000 gross ton-miles by electric locomotives is given as applicable "to conditions universally obtaining on regular profiles." Data published by the Bureau of Railway Economics in September, 1921, show that the fuel consumption on 24,000 selected miles of steam railroad averaged but slightly over 100 pounds per 1,000 gross ton-miles. Embraced in this mileage was the New York Central, Illinois Central, Chesapeake & Ohio, and St. Louis Southwestern. On 3,142 miles, or 60 per cent of Southern Pacific main-line mileage, the fuel consumption in the same month was approximately 100 pounds, while on the Salt Lake Division, 543 miles, the fuel record in October, 1921, averaged 91 pounds per 1,000 gross ton-miles, for all locomotives.

These are every-day performances, while we must remember that in the case of the Swedish experimental locomotive, and in records of electrically operated trains, the data relate either to experimental runs or to performance under exceptional conditions.

The performance of the modernized steam locomotive in every day service without favorable stage setting is shown in the records of some American roads. On one of them, 26 superheated consolidation locomotives showed in daily service on a run with long grades of 21 feet per mile an average consumption of 63½ pounds of coal per 1,000 gross ton-miles, ranging from 55.8 to 71.7.

Still more creditable to the steam locomotives and the men who drive them are the records of individual runners. Engineer A in two trips with trains of 2,809 tons consumed 48.7 pounds per 1,000 gross ton-miles; Engineer P in eight trips with trains of 2,863 tons consumed 58.2 pounds; Engineer R in fourteen trips with trains of 2,411 tons consumed 58.3 pounds.

Internal Combustion Engines

These engines vary widely in thermal efficiency and weights per unit, thus:

	Weight per Brake Horsepower	Brake Thermal Efficiency
Automobiles	15 pounds	19.0%
Diesel four-cycle....	370 pounds	35.0%
Diesel two-cycle.....	250 pounds	30.0%

The use of the first type, except perhaps for short runs in exceptional conditions with light vehicles, is prohibitive on railroads, because although the automobile engine is two and one-third times as efficient as the steam locomotive the present cost of its fuel is ten times as great.

The Diesel engine, however, shows the highest thermal efficiency of any engine ever designed. We have seen that the most modern locomotive transforms but about 8 per cent of the heat energy of fuel into work; the Diesel transforms 35 per cent, or over four times as much. Its fuel (crude oil, commonly called Diesel Oil) is not converted into gas as in gasoline engines, but is burned in the cylinder in the form of spray, and the expansive force of the products of combustion provides the motive power. Like the gas engine, however, it cannot start itself; this is usually done by means of compressed air carried in storage tanks. The fuel injected into the

cylinder in the form of fine spray meets air intensely heated by compression to 400 or 500 pounds to the inch, and flashes into perfect combustion; the products of combustion acting on the piston furnishing the motive power. Because of its inability to start itself it must use some form of variable speed transmission to start trains; the best way so far devised consists of electric transmission, but the combined engine and generator plants are so heavy as to bar its use for heavy traction. Because of its high thermal efficiency, the Diesel engine offers opportunity to make great savings, and its future is very hopeful.

The Swiss Federal Railways have a Diesel-Electric 200 h. p. rail motor car in use. It seats 69 passengers; weighs light, 146,000 pounds; hauls a trailer weighing 66,000 pounds that apparently seats as many passengers as the motor car, and attains a speed of 37 miles an hour on a fuel consumption of 30 to 43 pounds per 1,000 gross ton-miles.

The designs of an Italian Diesel Locomotive show the following:

Weight in operation, approximately	117 tons
Horsepower at 18½ m. p. h.	1,000 h. p.
Tractive effort at 18½ m. p. h.	19,840 pounds

The locomotive is started by highly compressed air stored in tanks and fed to cylinders at each end of the locomotives, which start it until sufficient speed is attained to start the Diesel engines; when the compressed air is cut off. The air tanks are recharged by means of a connection with the main engines.

The locomotive has three sets of cylinders, placed horizontally; two in each set actuating opposed pistons, which by means of walking beams and connecting rods transmit power directly to the forward and rear driving wheels through cranks set at angles of 120°.

The locomotive is reversed by means of link-motion gear, which reverses the action of the starting cylinders, and as the Diesels function equally well in both directions and do not go into action until after the locomotive has started, they operate in whichever direction the locomotive is started.

An experimental set of engines has been constructed but no locomotive, so that unfortunately no results of operation are obtainable.

The estimated fuel saving over a steam locomotive is 66 2-3 per cent.

This design shows progress in adapting the Diesel engines to locomotives of serviceable commercial sizes, particularly in solving the problem of weight, as the weight of a steam locomotive and tender to develop about 20,000 pounds tractive effort is 150 tons.

Use of Low-Grade Fuels

Little use is now made of lignites—low-grade fuels of which we have enormous supplies in the United States. Much of it is easily mined at shallow depths, and its extensive use would save a corresponding amount of our higher-grade, more expensive fuels.

E. H. Noffsinger Called By Death

E. H. NOFFSINGER, Chief Clerk to the General Manager died June 28, at the Southern Pacific hospital, after an illness of several months. He was well known over the system having been with the company for twenty years.

Noffsinger entered the Company's service in 1903. From 1912 to 1918 he served as Chief Clerk successively on the Western, Sacramento and Stockton Divisions, when he came to the General Manager's office as Head Transportation Clerk.

He was a man of trusted ability, who worked himself steadily up through the ranks. He was forty-five years of age and is survived by a wife.

The death of Noffsinger is mourned by his many friends and associates, as the passing of one who has set an example of service and self-sacrifice.

Pulverized Fuel

A good many experiments of varying success have been made in burning pulverized fuel on locomotives.

Reports of tests made on the Santa Fe do not indicate any very conclusive results.

Experiments on New York Central with 10-wheel freight locomotives with 60 to 65 freight cars, with pulverized fuel, B. t. u.'s from 14,000 to 14,739 per pound, show consumption on three tests 70 pounds per 1,000 ton-miles on lowest and 86 pounds per 1,000 ton-miles on highest. General results excellent; there was less than one cubic foot of slag and practically no ash in firebox and no soot on the flues at the end of each trip.

Chicago & Northwestern experiments in road passenger service satisfactory as to steam and time-making. B. t. u.'s in fuel per pound 13,964. A test of North Dakota lignite, B. t. u.'s 10,960, proved generally satisfactory.

Trent Amalgam Process

Pulverized anthracite and bituminous slack is mixed with about six times its weight of water. The product is fed into agitators, into which thin streams of 30° Baume fuel oil are introduced in four different stages of agitation. The oil amalgamates with the fine particles of coal. The effluent flows into a belted sieve, the amalgam being conveyed to the finished product pile and the liquid passing through.

The process seems to be based on the discovery that the amalgam of oil and coal occurs in particles just too large to pass through a sieve through which the dirty water will pass.

The amalgam is a plastic product, which has been used to some extent in heating office buildings in Washington.

Tests on locomotives on the Richmond, Fredricksburg & Potomac Railroad and in yard service by the Baldwin Locomotive works proved very satisfactory. The amalgam was high in B. t. u.'s and produced no ash.

Colloidal Fuel

"Colloidal fuel is a stable liquid mixture of pulverized coal or coke suspended in mineral oil or blended oil and tar. It is atomized and burned as a liquid fuel, using the ordinary pre-heat of fuel-oil."

It ranges from a free flowing fluid containing 30 per cent of powdered coal, 69 per cent of oil and 1 per cent of fixature to mixtures containing as high as 60 per cent of coal; B. t. u.'s 16,675.

The use of these coal and oil mixtures immediately increases the available fuel oil supply by from 35 to 50 per cent, at the same time producing a fuel that gives an almost equivalent B. t. u. content at a cost of from 15 per cent to 25 per cent less than fuel oil.

From what we have shown it would seem that the hope of the future for conserving fuel lies in:

1. Substituting hydro-electric current for steam, as our best steam locomotives can now fully equal the efficiency of electric locomotives using current generated in steam power stations.
2. Substituting steam turbines or compound condensing or turbine condensing engines for the simple engines now used on our locomotives. From progress already made in Europe, the solution of this problem appears encouraging.
3. The discovery of a cheap, high-gravity fuel that can be used in some such engine as is used on automobiles and airplanes.
4. Reduction of the weights of Diesel engines sufficiently to permit of their use as locomotive engines. Claims have been made that by compounding Diesels can be made to weigh about one-sixth as much as they now do, but as yet these claims have not been substantiated, in the form of a commercially practicable engine.
5. The development of a satisfactory variable speed transmission gear, to couple the Diesel engine to the driving wheels of a locomotive which will weigh very much less than the electric generator and motor, would go far towards establishing the Diesel engine as a locomotive prime mover.

New Attraction.—First Kid—"Sure, Charlie Chaplin's goin' to heaven when he dies!"

Second Ditto—"Gee! Pretty soft for Saint Peter!"—New York World.

She: "What is the difference between a worm, a caterpillar and an old man?"

He: "Absolutely none, the chickens get them all."—Exchange.

HOSPITAL SERVICE PRAISED BY PENSION VETERAN

J. T. Kingsford of Ogden, Utah, formerly Assistant Cashier in the Joint Freight Department at that point, and now on the "Honor Roll" of Southern Pacific pensioners, has written an appreciation of the efficient and kindly services tendered his son who was recently cared for at the General Hospital of the Company in San Francisco. In a letter to the Bulletin Mr. Kingsford says:

"I was very much gratified to find such superior service; such expert medical attention; and such complete and sanitary arrangments in every department, existing in the Southern Pacific's General Hospital at San Francisco.

"My wife and myself had been called to the bedside of our son, J. M. Kingsford, an employe in the Accounts Bureau, Coast Division, suddenly stricken with pneumonia.

"I sometimes let my thoughts revert to my own experiences of forty years ago. We had practically no hospital advantages in those days, and to 'pass the hat, for a sick or disabled employe was the ordinary way of extending aid. The method was surely crude, uncertain and unsatisfactory. I fail to recall any single item for which we have been 'chipping in' in paycheck deductions, where the results have been so noteworthy, and the benefit so widely distributed, as in the Hospital Department.

"Even a non-professional visitor can not help but be impressed by this big Southern Pacific institution in San Francisco, and its power to relieve suffering and allay anxiety. It's a fine, roomy structure of several floors, readily accessible by street car lines from any direction. There is no crowding of patients. Its tile floored wards, spotless cots and furnishings are restful to the eye; and there seems to be lacking all stiffness and formality. Instead, a spirit of sympathy and kindness prevail, and one is made to feel that even here they belong to somebody.

"It is important that we all—the employe of yesterday and today—do everything possible to keep clean and wholesome, in our bodies and minds; but when we do need a hospital, we need it badly, and every employe should appreciate to the limit the splendid provisions made by the Southern Pacific Company."

WIRELESS PROVIDES A TIP ON BUSINESS FOR S. P.

Employe business-getters on the Pacific System who are anxious to boost the standing of their division in the solicitation campaign, may get a suggestion from the recent experience of A. R. Atkinson, Assistant General Freight & Passenger Agent at Dallas, Texas, as related in the S. P. Atlantic System Bulletin.

Mr. Atkinson was listening in on a radio message broadcasted stating that a prominent movie star from California would appear at an auto show in Dallas. This was his "tip" and the following morning he sent a wire to General Passenger Agent McGinnis at Los Angeles suggesting that the business be solicited.

"The old sayin' ain't true that 'the woman allus pays,'" observes Uncle Cyrus Lemon. "Lots o' times she has it charged to her husband."—Exchange.

SACRAMENTO SONGSTERS IN PROGRAM AT CHURCHES

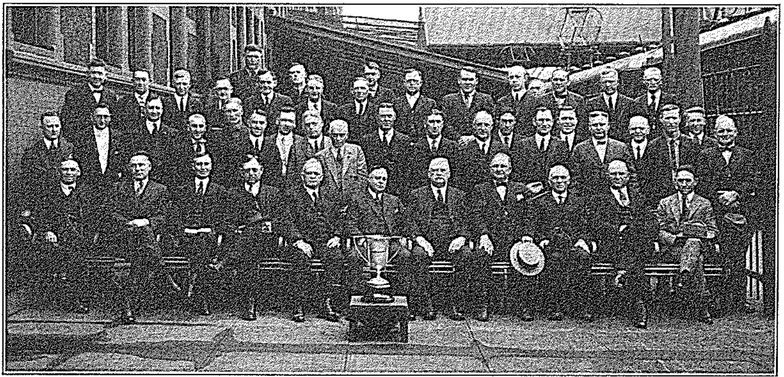
The Southern Pacific Double Quartet from the Sacramento Shops again brought much commendation for their musical abilities when they rendered programs at two San Francisco churches on June 17th. In the morning the shop songsters sang several numbers at the First Baptist Church and in the evening were featured on the program of the Methodist "Church of all Nations." In addition to the vocal numbers, H. T. Corlett played violin solos.

Arrangements for the appearance of the double quartet were made by the Good Service League and L. C. Ioas, president of the employes' organization presided at the evening service.

Members of the double quartet are: First tenors, H. J. Harder and I. G. Manchester; second tenors, J. Nordella and J. M. Hogan; first bass, C. B. Braun and A. Apichino; second bass, W. E. Thomas and W. Dowrick.

COURTESY COMMENDED

H. C. Jenison of the U. S. Department of Interior writes from Washington, D. C., calling attention to the courteous services recently tendered him by Geo. A. Garoutte, Ticket Clerk at Oakland, who arranged to have Mr. Jenison's baggage checked from San Francisco while he boarded a train at Berkeley. "I was impressed not so much with the service rendered as Mr. Jenison assured me the Company did that sort of thing, but I was impressed with his courtesy, his unusual effort and his apparent desire to assist me," wrote Mr. Jenison.



Group of Portland Division officers and employes who attended fuel oil committee meeting at Portland June 20. The silver trophy cup won for excelling in fuel conservation during first quarter of the year is shown in the foreground.

ROADMASTER G. W. DONNELL IS SUDDENLY CALLED

G. W. Donnell

Stricken as he stepped from a work train, George W. Donnell, Roadmaster on the Sacramento Division with headquarters at Marysville, died suddenly on May 24.

Mr. Donnell was born at Marysville, Cal., March 26, 1872. He entered service of the Southern Pacific Company in 1887. His first work was with the Engineering Department. He was employed in the Maintenance of Way and other departments at various times until in July, 1899, when he was appointed Roadmaster for the Ashland district.

In 1908 Mr. Donnell was appointed Postmaster at Grants Pass, Ore., and served two terms in that capacity for the government.

Upon returning to the Southern Pacific service, Mr. Donnell was stationed as Roadmaster at Marshfield, Ore. In 1917 he was transferred to the Eugene district, remaining there until last September, when he was transferred to Marysville.

Mr. Donnell is survived by his widow and two daughters, Katherine and Dorothy.

713 SAFETY SUGGESTIONS ARE MADE BY EMPLOYES

Ten safety committee meetings were held during May, attended by 321 committeemen and visitors; 713 safety suggestions were discussed; 11 talks on accident prevention made by committeemen; and reports received to the effect that 3399 employes were talked to individually by committeemen on safety matters. Talks at the meetings were made by the following:

J. A. Bronnar, sheet metal worker, Sacramento General Shops & Stores; J. F. McAuley, storekeeper, Portland Division; T. O. Capps, brakeman, Stockton Division; W. H. Fine, general foreman car department, Los Angeles General Shops & Stores; T. L. Williamson, roadmaster, Salt Lake Division, Terminal & Shop; F. Rice, machinist, and E. R. Gillespie, signal maintainer, Sacramento Division; J. Jensen, roundhouse foreman, Coast Division, Terminal & Shop; J. M. Hill, engineer, Los Angeles Division; J. T. Arey, yardmaster, Western Division; L. P. Cooley, pilot, Steamer Division.

J. B. Monahan, supervisor of safety, addressed the Los Angeles, Stockton, Sacramento Divisions and Salt Lake Division Terminal & Shop safety committees.

Wasted Sacks Are Dollars Lost

Huge Saving Can Be Made During One Year In Careful Handling of Cement Sacks

By A. S. McKELLIGON, General Storekeeper

IT takes $40.00 worth of sacks to hold 100 barrels of cement. If one half of these sacks are lost or destroyed, the cost of the cement has increased 20 cents a barrel. In every carload of cement there is $80.00 worth of sacks.

During the year 1922 there were 280,000 sacks of cement purchased for distribution on the Pacific System, and probably double that number will be used during this year. So it will be seen that from $28,000 to $50,000 is the turnover in cement sacks alone in one year.

It is the duty of every employe handling these sacks to see that they are given proper care while in his possession in order that they may be returned to the cement companies in such shape that the Company may receive full credit.

Foremen and others should be warned to keep an eye on the condition of the sacks when received. If a sack is very badly torn, its contents should be transferred to a good sack in order to avoid waste of cement and further tearing. If a car contains any considerable quantity of torn sacks a report should be made after careful examination stating an opinion as to the cause of the damage. Make this report immediately. Be careful that the sacks are not torn during unloading, and see that they are carefully handled while being warehoused.

Keep Sacks Dry

Never leave cement sacks, whether full or empty, where there is the slightest chance of their getting wet.

Cement sacks make handy tool bags, knee pads, aprons, etc., but every sack so used will probably cost you ten cents. Misuse of sacks, though insignificant at first, will soon reach a point of great expense and total loss.

One of the best schemes for protecting these sacks on the job is to have beside the mixer a good tight box with a locked lid and a slit in one side through which the empty sacks can be shoved as fast as they are emptied. A check should be made at the end of the day and an investigation made for any missing sacks.

Empty sacks should be turned over to the supply train at the earliest possible time. They should not be allowed to accumulate on the job. For convenience in handling they should be tied in bundles of 25 to 50, marked and stored in a dry place until arrival of the supply train.

It is important not only to keep the sacks from becoming wet but also from coming in contact with oil. Care should be taken in seeing that the floor of the car is free from oil before the sacks are loaded for shipment. The same practice should be followed when shipping full sacks, as considerable cement and many an empty sack has been spoiled by being loaded in a car with an oil soaked floor.

How Sacks Filled

It is interesting to note how cement sacks are filled. Up to a few years ago each sack had to be filled with a shovel and it was necessary to stop and weigh each package, regulating the amount by adding a little cement or taking a little out. Now these sacks are filled after the sack is tied. The sack has a hole or valve in the bottom and is filled by mechanical means. This valve consists of a flap over the hole in the bottom of the sack and is made by turning over a corner of the cloth before it is sewed. The cement flows like water out of an "L" shaped tube into the sack and when filled, the valve closes and is held shut by the weight of the contents.

One cement sack is a small item in itself, but thousands of them misused or destroyed represents a huge loss. This is another simple way in which employes can set into practice a saving that will result in big returns during a year.

RAILROADER WHO FOUND HE COULDN'T PASS THE BULL

The boys in the roundhouse at Sacramento claim they have found at least one railroader in their midst who can not pass the Bull. This contention is based on the recent experience of A. B. Waltenspiel, Clerk in the roundhouse, who was suddenly placed in the role of a "toreodor" when he was charged by a wild and ferocious bull while enjoying a Sunday outing in the family automobile on the highway not far from the capital city. His bovine majesty was evidently out looking for railroad men and there wasn't a chance for the roundhouse clerk to dodge by. However, he must be credited with bringing the bull to his knees, but only after a pair of horns had been rammed deep into the radiator.

Services of Kindness

Conductor J. P. Molter and Brakeman J. E. Cook of the Sacramento Division were recently publicly thanked in a published article for services of kindness tendered Mrs. Viola Allen who was taken ill while en route to Chico.

Make Your O. S. & D. Report a Credit

Agent Shelly Urges Closer Observation of Rules In Preventing Damage to Freight

By W. F. SHELLEY, Agent, Wabuska, Nevada

The following statement addressed by Mr. Shelley, Chairman of Loss and Damage Prevention Committee, Salt Lake Division, to employes on that division contains many practical suggestions aimed at reducing claims for loss and damage to freight and should be of interest to all employes engaged in the handling and moving of freight.

BEFORE there were such things as human laws, it is a matter of record that "every man did that which was right in his own eyes." Under such conditions no one could be condemned for "where there is no law, there can be no transgression."

However, we now recognize that no business could exist a single day without law and no railroad could operate without rules. In this day and age men are not permitted to do the things that are right solely in their own eyes. Rules and laws are made and must be adhered to.

Violation of rules creates trouble for all of us. Plans have been devised for the handling of railroad business which are almost infallible. These rules are the result of carefully thought out plans of the brainiest men in the railroad business. We can depend upon it that in carrying out these rules we will be handling the business passing through our hands in a perfectly efficient manner.

The object of our Committe on Loss and Damage Prevention is to try and induce our fellow employes to handle their work always in accordance with established rules which, if adhered to, will prevent at least three-fourths of our losses and materially reduce the number of loss and damage claims.

The statement recently issued by I. W. Emmons, Chairman of the San Joaquin Division Loss and Damage Prevention Committee, is very instructive. Based on personal investigation, he has enumerated the causes for loss and damage on that division as follows:

1. Freight improperly marked when received.
2. Receiving shipments not packed to withstand ordinary handling in transportation.
3. Incomplete and indistinct Bills of Lading and shipping orders.
4. Failure to check carefully.
5. Loading by total number instead of by each article.
6. Unloading and transferring without checking name on package against way bills.
7. Overlooking proper receipt at time of delivery.
8. Failure to recoöper and invoice promptly articles when in a damaged condition.

During the war it was a patriotic expression to say, "Your Best is None Too Good." This same rule should apply to the handling of our business. Railroad service demands your best and is worthy of your best efforts.

During the first half of 1922 we made a fine record on the Salt Lake Division, but during the last half of the year our Over Short and Damage report showed room for improvement. Why should this be? It must be due to the fact that some of our fellow employes follow the plan of our afore mentioned ancestors and do their work in the manner that seems right in their own eyes, instead of according to rule.

This method of doing business is a very expensive one, causing loss all around, and my purpose in writing you is to urge you to take a look over your own Over Short and Damage reports, ascertain the causes, and determine if you do not think you could have done much better.

These remarks are intended also for our brother trainmen, enginemen and other employes having to do with the movement of freight, and I would like to ask this question:

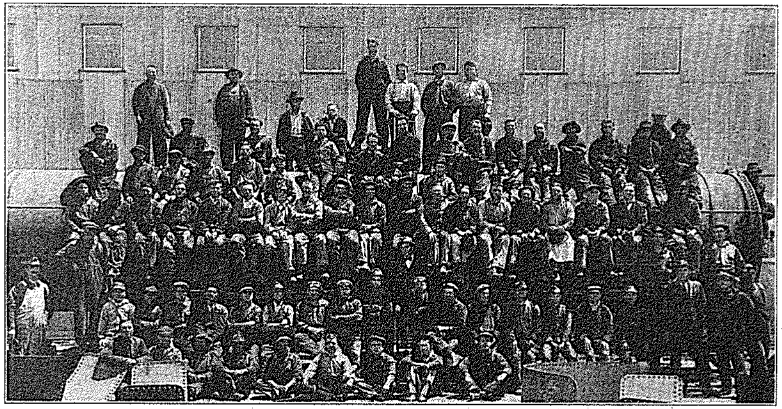
Have you been handling freight as you would have handled it, had it been your own personal property? (Bring your conscience to the bar, and hold court on yourself).

You've heard the story of Judge Ellsworth of San Francisco: His conscience troubled him, and coming into Court one morning he said to his clerk, "Enter a case on the Docket. The People of the State of California versus Judge Ellsworth. Charge—Intoxication." Then he went on: "What reason have you to give why sentence should not be passed?" "Fined Fifty Dollars!!" He paid his fine, took his medicine, and gained the respect of everyone.

Let's be conscientious about our work and be straight with ourselves in doing this work as it should be done. Above all things be sure and handle **other** people's freight the way that you would like them to handle freight which was your property.

Use care in accepting, moving, checking and delivering, and let us put forth effort to conduct the work without error. These may be considered little things, but remember little things count, and are what make up the good record.

Friend and Fellow Employe: I am going to count on **YOU** to help us improve our record next quarter: Will you do it?



Steel Car Department employes at Bayshore Shops, Gus Christen, Supervisor. Photo was taken by W. H. Arnold, pumper.

S. P. MAN'S HOME OPENED TO DELAYED PASSENGERS

When storm on the Great Salt Lake delayed trains several hours at Promontory Point on May 10th, S. P. Farr, Southern Pacific Batteryman at that place, welcomed dozens of passengers to his home. The word was passed out that Mr. Farr had extended his hospitality and passengers went in groups from the trains to Mr. Farr's residence where they enjoyed dancing by music from phonograph and radio until midnight.

Many remarked on the unusual thoughtfulness of this Southern Pacific man whose kindness did much to keep the passengers from becoming weary of waiting.

PIN PAPERS IN WAY NOT TO EXPOSE SHARP POINT

Did you ever stick your finger with a pin while handling papers?

No doubt you have, and the unpleasant occurence caused you to heap maledictions on the head of the careless person pinning papers in such a way as to leave the exposed point a hazard to those handling files and other papers.

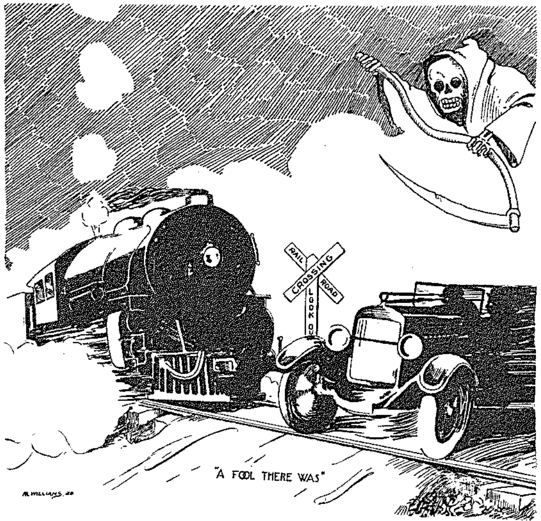
Pins should never be used to hold more than six sheets of paper. Files of greater thickness than that should be fastened together with brads.

Many ways of fastening papers with pins are used but perhaps the most satisfactory method is to insert the pin in the left upper corner of the sheet at an angle of 45 degrees and starting at a distance of approximately 1¼ inches from the left side and about ½ inch from the top of the sheet, taking two tucks through the papers and then half-way through again so that the exposed point will be buried in the file. This method is easy and safe and holds the papers securely, while eliminating all danger.

File clerks and stenographers often little realize the danger of leaving a pin point exposed. Pin pricks are unpleasant and may result in grave results such as blood poisoning and mutilated fingers.

Pinning papers correctly may seem a small thing but office men, from executives on down, will tell you the results are well worth the trouble.

Grade Crossing Accidents Fought



A. L. Williams' conception of a reckless motorist's fate.

LAST year 53 persons were killed in automobile accidents at grade crossings on the Southern Pacific's Pacific System Lines. There was a total of 953 accidents and 316 persons were injured.

In 230 of these accidents the automobile ran into the side of the train; 121 accidents happened when the automobile was stalled on the tracks; 30 automobiles skidded into the side of the train; 76 ran into the crossing gates and in 8 instances the crossing flagman was run down as he endeavored to warn motorists of approaching trains.

Southern Pacific is joining other railroads of the United States in redoubling efforts to reduce the number of grade crossing accidents during the period of the Careful Crossing Campaign, which started June 1. During the four months of the campaign every means will be adopted to reach the public with statistics and literature urging the co-operation of motorists in this undertaking.

The cartoon by A. L. Williams, pumper for the Southern Pacific at Picacho, Ariz., shown above, is a striking pen picture of the careless and foolhardy attitude assumed by many motorists. It is an able contribution to the Company's efforts

WHAT A HOT BOX DOES

A hot box on a freight car looks like a small thing on the daily train report, but in the result of this little flare up is frequently recorded serious changes to operating efficiency. Sometimes it leads to a broken journal, cars in the ditch and the blocking of the main line for hours. Everybody knows what this means. Again where no derailment occurs, the hot box leads to train delays, necessity for set out, undue consumption of expensive fuel, shippers exasperated because their freight is not in warehouse, interferences with schedules and overtime, stress on equipment, damage to track at times and once in a while a bad accident on account of train trying to make up for time lost in cooling journal and repacking.

Hot boxes are a menance to efficient train service and too far reaching in their effects to be ignored by anybody. They should be given a greater prominence and greater efforts should be made to eliminate them.—S. P. Bulletin (Atlantic System)

The Spirit of '76

ON JULY 4, 1776, in Philadelphia, a church bell, ringing furiously, apprised the citizens that the American colonies had declared their independence.

One hundred and forty-seven years have passed, and in that time these few colonies scattered along the Atlantic Coast have grown into a great nation, whose boundaries extend from ocean to ocean. A vast expanse of territory has been settled and developed. Its products go to feed, clothe and house peoples of all nations. The Thirteen Colonies have grown into the United States.

This wonderful growth and development have been assisted and hastened in great part by science and invention, which have provided the devices by which spaces could be shortened, mountain barriers pierced and communication made a matter of seconds instead of weeks and months. But, after all, it has been the qualities of the spirit, shown by those signers of the Declaration of Independence, that have been the greatest force in making this nation what it is today. The physical instruments contributed greatly to the country's development but it took courage and foresight to use them.

Fine fearlessness and disregard of obstacles have been evident in all American achievements in business or in industry. These characteristics were exhibited by those men who built the first railroads across this continent. The plan to drive the first line across the Sierra from California to the east was declared impossible. Yet those who fathered this project risked their fortunes, went ahead and overcame all difficulties. Their accomplishment was the greatest contribution to the wealth and prosperity of this western country.

It has been well said that "out of traditions grow accomplishments." In the same way that the great deeds of our Colonial forebears have had their inspiration for those who followed, so the traditions founded in the original construction of the lines of our own company may have their influence on us all to bring about still further achievements.